

OUTSMARTING THE STATE:  
A COMPARATIVE CASE STUDY OF THE LEARNING CAPACITY  
OF COLOMBIAN DRUG TRAFFICKING ORGANIZATIONS AND  
GOVERNMENT DRUG ENFORCEMENT AGENCIES



By

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## KEY TO ABBREVIATIONS

AUC	<i>Autodefensas Unidas de Colombia</i> (United Self-Defense Forces of Colombia)
BINLEA	Bureau of International Narcotics and Law Enforcement Affairs
BINM	Bureau of International Narcotics Matters
CIA	Central Intelligence Agency
CNN	Cable News Network
CNNespañol	Cable News Network Español
CNP	<i>Policía Nacional de Colombia</i> (Colombian National Police)
DAS	<i>Departamento de Seguridad Administrativo</i> (Department of Administrative Security)
DEA	Drug Enforcement Administration
DOJ	Department of Justice
ELN	<i>Ejército de Liberación Nacional</i> (Army of National Liberation)
EPIC	El Paso Intelligence Center
FAA	Federal Aviation Administration
FARC	Fuerzas Armadas Revolucionarias de Colombia (Revolutionary Armed Forces of Colombia)
Fiscalia	<i>Fiscalia General de la Nación</i> (National Prosecutor General)
FBI	Federal Bureau of Investigation
FY	Fiscal Year
GAO	General Accounting Office

G-DEP	Geographic-Drug Enforcement Program
IEPRI	Institute of Political Studies and International Relations
INTERPOL	International Criminal Police Organization
IRS	Internal Revenue Service
NADDIS	Narcotics and Dangerous Drugs Information System
NAS	Narcotics Assistance Section
NDIC	National Drug Intelligence Center
NSC	National Security Council
ONDCP	Office of National Drug Control Policy
PCOC	President's Commission on Organized Crime
Pseud	Pseudonym
RCN	<i>Radio Cadena Nacional de Colombia</i> (National Radio Network of Colombia)
WOLA	Washington Office on Latin America



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Over the past several decades, Colombian drug trafficking enterprises have transported large quantities of cocaine, heroin, and other psychoactive drugs to the United States in spite of government efforts to disrupt this illicit commerce. Contrary to much existing scholarship, this study argues that the persistence of the Colombian drug dilemma is, in part, due to the ability of criminal enterprises to alter their organizational structures and behavior in response to information and experience, store this knowledge in practices, procedures and performance programs, and select and retain innovations that produce satisfactory outcomes. Drawing on a multidisciplinary body of literature on organizational learning, and interviews with U.S. and Colombian officials, researchers, and former drug traffickers, the study demonstrates that smuggling organizations “learn,” and in the process become increasingly difficult for drug enforcement agencies to identify and dismantle.

Drug trafficking enterprises are not the only organizational learners of interest in this study. Law enforcement agencies also alter their practices and procedures in response to knowledge and experience, thereby improving task performance and facilitating their survival as bureaucratic organizations. To understand interactions between these interdependent, rationally bounded actors, the study introduces the concept of competitive learning games, and discusses numerous organizational and environmental factors that tilt the playing field in favor of criminal enterprises. The study also includes an historical analysis of the Colombian drug trade dating back to the 1930s. *Outsmarting the State* is of broad theoretical and empirical interest to scholars and policymakers. The study contributes to diverse bodies of literature in political science, sociology, economics, organization theory, and criminology. The research has significant implications for existing U.S. drug and crime control policies in Colombia, Mexico, and elsewhere.

## CHAPTER 1 INTRODUCTION

Over the past two decades, the governments of Colombia and the United States identified drug trafficking as a national security threat to their respective countries; a threat they sought to eliminate by attacking individuals and groups engaged in production, transportation, and distribution of controlled substances. Despite devoting considerable resources to drug enforcement policies since the early 1980s, the two governments failed to reduce illicit drug flows between their countries. Indeed, according to the best available estimates, in Colombia the production of cocaine and heroin has increased substantially in recent years.

What accounts for this intractable dilemma? Why have the Colombian and U.S. governments been unable to impede the production of psychoactive drugs? Why are these governments unable to resolve a national security threat that emanates not from sovereign neighbors but from presumably weaker non-state actors? This study answers these questions through a comparative case study of Colombian trafficking enterprises and U.S. and Colombian drug enforcement agencies. Drawing on organization theory and extensive primary and secondary-source data, the study develops a learning-based explanation for the persistence of drug production in Colombia.

In this chapter, my aim is to set the stage for what follows. I begin with a description of illicit drug dilemma in Colombia and conventional explanations offered for this conundrum. I continue with a brief discussion of the alternative explanation that

forms the heart of this study: the organizational learning capacity of Colombian trafficking enterprises. After emphasizing the contribution of the research to existing bodies of literature in political science, organization theory, and criminology, I describe the research design in detail. The chapter concludes with an overview of the remainder of the study.

### Persistence of Illicit Drug Production in Colombia

Over the past two decades, the Colombian government has sought to eliminate the production and transit of illicit narcotics in its national territory. Working closely with the U.S. and other members of the inter-American narcotics control regime, the Colombian government has implemented “supply-reduction” programs that eradicate drug plantings, destroy drug processing laboratories, intercept the transportation of narcotics and the chemicals used to make them, and apprehend suspected drug traffickers and confiscate their illicit profits.

The costs of these programs, in terms of budget allocations and human personnel, are significant. Since the early 1980s, the Colombian government has spent several billion US dollars to implement supply-reduction initiatives within its national territory. While the Colombian government has received considerable anti-narcotics assistance from the U.S. and other foreign governments over the years, it has also invested a substantial portion of its own resources in the “war on drugs.” Moreover, in recent years, the Colombian government’s anti-drug expenditures have increased significantly. In the 1980s, Colombia’s anti-narcotics budget varied between US\$ 20 and 25 million per year, with the U.S. providing half this amount. In 1995 the Colombian government devoted US\$ 900 million of its own funds to anti-drug efforts, and in 1996 this amount increased

to over US\$ 1.3 billion. In 1997, the Colombian government allocated US\$ 1.1 billion for counter-narcotics efforts, which represented 4.8% of the government's budget for that year (CNN, 1998a; Lee, 1989, p. 202; Republic of Colombia, 1997).

The human costs of the Colombian government's counter-narcotics efforts are even greater. Every year thousands of Colombian civilian and military officials participate in various phases of planning and/or implementing supply-reduction policies. The danger inherent in this line of work in Colombia is illustrated by the deaths of hundreds of government officials over the past 15 years. During one gruesome stretch from 1985 to 1988, Colombian traffickers, particularly those associated with the so-called Medellín cartel, killed over 400 police and military officers, dozens of judges and journalists, and several high-ranking government officials. While the number of government officials killed by drug traffickers has declined in recent years, death remains a persistent reality for those covering the anti-drug beat in Colombia. Since 1994, 31 counter-narcotics Colombian agents have been killed and 68 have been wounded in the line of duty (CNN 1998a; Lee, 1989, p. 202).

Notwithstanding the considerable financial and human costs of Colombian anti-drug efforts, in recent years the government has enjoyed limited successes in implementing supply-reduction policies. One example of success has to do with recent increases in the eradication of illicit drug plantings. Over an 8-year period, beginning in 1986 and ending in 1993, the Colombian government eradicated an estimated 5,714 hectares of coca plantings. In 1996 alone, drug enforcement units eradicated 5,600 hectares of coca plantings and 6,028 hectares of opium poppy plantings. Four years later, they eradicated an estimated 47,000 hectares of coca plantings and 9,2542 hectares of

opium plantings.<sup>1</sup> Moreover, since 1991 Colombian anti-drug units, working closely with their U.S. counterparts, have captured the leaders of the Medellín, Cali and the North Valley drug trafficking organizations. These arrests are part of a government strategy aimed at dismantling the communications, transportation, and financial infrastructures of the larger trafficking organizations by targeting their senior managers. The goal of the so-called “kingpin strategy” is to disrupt the production of narcotics in Colombia by capturing, incarcerating, and confiscating the wealth of those individuals who direct the illicit drug industry (CNN, 1998b; Nieves, 1997).

Unfortunately, the kingpin strategy and increased eradication efforts have failed to resolve the Colombian narcotics dilemma. Indeed, according to estimates contained in the most recent *International Narcotics Control Strategy Report*, the estimated amount of potential coca production in Colombia increased from 50,900 hectares in 1995 to 169,800 hectares in 2001.<sup>2</sup> Corresponding with the increase in coca production has been increases in estimated cocaine production from 230 metric tons in 1995 to more than 580 metric tons in 2001. The estimated cultivation of opium poppies in Colombia, used to make heroin, has also increased in recent years. In 1995 an estimated 10,300 hectares of Colombian farmland were devoted to opium production. By 1997, the last year for which

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<sup>1</sup> These figures are contained in the *International Narcotics Control Strategy Report*, which is published annually by the Bureau of International Narcotics and Law Enforcement Affairs (BINLEA and BINM, various years, and ONDCP 2002). A caveat is warranted in presenting these and other drug-related data in this study. Generating estimates for illicit drug production and drug performance outputs remains, at best, an imprecise science. The clandestine nature of narcotics trafficking and the politicized nature of drug enforcement make it difficult to produce accurate approximations for these activities. Throughout this study, figures regarding drug production and drug enforcement indicators are meant to illustrate trends rather than offer precise estimates.

<sup>2</sup> Although this report contains what many specialists regard as the most accurate production estimates of illicit drugs available, several researchers who have conducted field studies argue that the report underestimates the amount of cocaine and heroin produced in Colombia (Clawson & Lee, 1996; Uribe Ramírez, 1997). A hectare is equivalent to 2.47 acres.

figures are available, the estimate increased to 13,572 hectares. The estimated production of opium gum, which is used to make heroin, increased slightly from 65 metric tons in 1995 to 66 tons in 1997. Over the past several years, the number of hectares in Colombia devoted to marijuana cultivation and the estimated production of marijuana itself have stabilized at approximately 5,000 hectares and 4,150 metric tons respectively (BINLEA, 1998, 2001).

While the trafficking of illicit narcotics is more difficult to estimate than its production, there are indications that the supply of the Colombian-produced cocaine to the U.S. has stabilized in recent years. For example, the U.S. Drug Enforcement Administration (DEA) estimates that the price and availability of cocaine in the U.S. have remained relatively constant. For the past several years, wholesale (per kilogram) prices for cocaine have remained within a \$10,500-36,000 price band, while cocaine purity at the retail level (per gram) has stabilized at approximately 60% (DEA, various years). Meanwhile, the flow of Colombian-produced heroin to the U.S. appears to be rising. The DEA reports that the nationwide average purity for heroin at the retail level has increased from 27% in 1991 to 36% in 1996. Spearheading this trend is South American heroin—most of which originates in Colombia—which has a retail purity of 50.3% (DEA 1997). In addition, the amount of Colombian-produced heroin seized by U.S. and Colombian anti-drug authorities has also increased in recent years (BINLEA, 1998).

These developments have led the State Department to observe that in spite of improved anti-drug efforts on the part of the Colombian government, the country remains “the world’s leading producer and distributor of cocaine and an important supplier of heroin to the U.S.” (BINLEA, 1998).

### Explaining the Colombian Drug Dilemma

What accounts for the persistence of illicit drug production in Colombia at a time when the Colombian government has devoted more financial and human resources to its anti-drug efforts than ever before? Why has the Colombian government been unable to reduce the production and transit of illicit narcotics within its national territory? Over the past decade, scholars and policy makers have produced a cottage industry of literature that attempts to answer these questions. Several prevalent explanations have emerged from these studies. For example, many argue that the Colombian government is unable to resolve the narcotics dilemma because it lacks sufficient anti-drug resources. In an article that was published in the influential journal *Foreign Affairs*, Bagley argued that the Colombian government lacks the necessary resources to effectively counter the drug trade. In order for "real progress" to be made he insisted that the U.S. should provide Colombia and the other Andean governments "with the \$2-3 billion annually that would be required to establish effective control over drug producing areas" (Bagley, 1988, pp. 87, 89). In a more recent study of the cocaine industry, Clawson and Lee argued that, in spite of increased international assistance over the past ten years, Colombia and the other Andean governments still lack the necessary resources to stop drug production and trafficking in their countries (Clawson & Lee, 1996, p. viii).

Similarly, U.S. and Colombian officials charged with implementing counter-narcotics programs in Colombia maintain that they do not receive adequate resources to effectively carry out their mandates. The U.S. and Colombian officials interviewed in this research emphasize that insufficient resources were a significant impediment to achieving greater counter-narcotics success in Colombia. The Director of the Narcotics



Assistance Section (NAS) of the U.S. Embassy in Colombia complained of recent budget cuts to his program, wondering aloud, "How am I going to wipe it out?" (Moreno, 1997). Several officials from the Anti-Narcotics Directorate of the Colombian National Police (CNP) underscored the difficulties in covering an area larger than the state of Texas with only 2,500 agents (Buitrago, 1997).

A second prevalent explanation of the Colombian narcotics dilemma is that the Colombian government's will to implement effective policy has been seriously compromised by drug-related corruption. This charge has been leveled at the leaders of the political system and the government agencies responsible for carrying out anti-drug programs. In another article, Bagley argued that even if the Colombian government were to receive sufficient aid, it would still face significant obstacles to implementing more effective policies, principal among them being the significant level of drug-related corruption among government agencies and institutions (Bagley, 1989-1990).<sup>3</sup> Nadelmann claims that during the 1970s and 1980s, drug traffickers succeeded in corrupting "all levels of government, including a significant share of the legislature and cabinet-level ministers.... Even the Colombian military, which has remained a powerful and relatively corruption-free organization, could not resist the inducements offered by the drug traffickers" (Nadelmann, 1993, p. 279).

In the 1990s, drug-related corruption continued to flourish. Ernesto Samper's presidency (1994-1998) was severely weakened by credible allegations that his presidential campaign had received a US\$ 6 million donation from several cocaine entrepreneurs based in Cali. In 1998, U.S. authorities seized a Colombian military plane

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<sup>3</sup> Andreas *et al.* (1991-1992) make a similar argument.

in Fort Lauderdale carrying 1,639 pounds of cocaine and 13 pounds of heroin, tarnishing the drug-fighting image of Colombian president, Andrés Pastrana. The incident, which came a week after Pastrana's state visit to the U.S., prompted Colombia's Defense Minister to concede that the country's air force has been "seriously infiltrated" by trafficking organizations. U.S. and Colombian officials that interviewed in this research also stress the role of drug-related corruption in preventing more effective counter-narcotics efforts on the part of the Colombian government (CNN, 1998d).

Toward an Alternative Explanation:  
Organizational Learning by Trafficking Enterprises

Although these explanations help account for the persistence of drug production and trafficking in Colombia, they do not provide a fully satisfactory explanation of the drug dilemma. One reason for this is that they do not give adequate attention to the non-state actors that manage the production and distribution of cocaine and heroin within the Western Hemisphere. Since the 1970s, Colombian trafficking enterprises have provided a steady flow of narcotics to the U.S. and Europe. In the process, these criminal enterprises have proven to be innovative and highly adaptive. These skills enabled them to maintain the profitability of their enterprises and survive persistent government efforts to destroy them.

The literature on the illicit drug industry in Colombia includes government reports,<sup>4</sup> journalistic accounts,<sup>5</sup> and academic studies.<sup>6</sup> Several recent studies have

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<sup>4</sup> See the Drug Enforcement Administration (1994, 1995, 1996, 1997), FBI (1993), White House (1998), and Zabudoff (1997).

<sup>5</sup> See Cañón (1994), Castillo (1987, 1991, 1996), Castro (1996), Duzán (1994), Eddy *et al.* (1988), García (1991), Giraldo (1992), Gugliotta and Leen (1989), Mermelstein (1990), Rincón (1990, 1994), and Shannon (1988).

<sup>6</sup> Betancourt and García (1994), Clawson and Lee (1996), Dombois (1998), Geopolitical Drug Watch (1998), Griffith (1997, 1998), Krauthausen and Sarmiento (1991), and Tokatlán (1995).

highlighted the adaptability of the organizations that coordinate this industry. Griffith (1997) noted that “[t]raffickers are not only creative, they are also adaptive, changing methods and operatives depending on the success of counter-narcotics measures” (p. 84). Clawson and Lee argued that trafficking organizations have adapted to government efforts to reduce their profit margins by increasing production efficiency, improving and diversifying smuggling methods, increasing their “downstream” penetration of U.S. drug markets, and diversifying products and markets (Clawson & Lee 1996, pp. 10-12). Krauthausen and Sarmiento argued that pressure from drug enforcers compels traffickers to invent new methods and strategies for carrying out their illicit activities make the point that in the face of continuous law enforcement pressure (Krauthausen & Sarmiento, 1991, p. 37).

Government agencies and officials also recognize the adaptability of transnational trafficking groups and the threat they pose to U.S. interests. The 1998 National Security Council’s *International Crime Control Strategy* stated that, “[i]nternational criminal organizations are adaptive and resilient, responding quickly to effective law enforcement pressure” (NSC, 1998). A recent General Accounting Office report links traffickers’ adaptability to the failure of government drug enforcement efforts:

A key reason for U.S. counternarcotics programs’ lack of success is that international drug trafficking organizations have become sophisticated, multibillion-dollar industries that quickly adapt to new U.S. drug control efforts. As success is achieved in one area, the drug-trafficking organizations change tactics, thwarting U.S. efforts (GAO, 1997, p. 3).

Although these studies suggest that the trafficking enterprises adapt their behavior in response to drug enforcement activities, they do not provide a conceptual framework for understanding this process. However, there is a multidisciplinary body of literature on

organizational learning that provides some clues as to how and why drug trafficking organizations may learn. This literature examines the behavior of firms in competitive markets and attempts to explain how they

build, supplement and organize knowledge and routines around their activities and within their cultures, and adapt and develop organizational efficiency by improving the use of the broad skills of their work forces (Dodgson, 1993, p. 377).

### Significance of Research

This study is of broad theoretical and empirical interest to scholars and policy makers. The research contributes to diverse bodies of literature in political science, sociology, economics, organization theory, and criminology. Within political science, the research transcends traditional sub-disciplinary boundaries between international relations, comparative politics, and public policy. It focuses on actors (criminal organizations and law enforcement agencies) and issue areas (transnational organized crime and drug trafficking) often neglected in studies of international security, foreign policy, globalization, and state making.<sup>7</sup> While political scientists have long been interested in organizational learning, the law enforcement agency and criminal enterprise have rarely been topics of interest. Instead, they have directed their attention towards more accessible subject matter, including government institutions, intergovernmental policymaking bodies, and military organizations.<sup>8</sup> These organizations are recognized by

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<sup>7</sup> Of course there are exceptions. Examples include Andreas (2000), Arquilla & Ronfeldt (1993, 2001), Desch *et al.* (1998), Farer (1999), Friman & Andreas (1999), Griffith (1997), Nadelmann (1993), and Williams (1994, 1998).

<sup>8</sup> Examples of this literature include Allison (1971), Breslauer and Tetlock (1991), Brown (2000), Deutsch (1966), Dodd (1994), Eden (Forthcoming), Etheredge (1985), Evangelista (1988), Feldman (1989), Golant (1998), Goldgeier (1994), Haas (1990), Haas (1992), Hall (1993), Heclo (1974), Jervis (1976), Khong (1992), Le Prestre (1995), Leng (1992), Leeuw *et al.* (1994), Levy (1994), McCoy (2000), Mendelson (1993), Moltz (1993), Nagl (1999), Neustadt & May (1986), Nye (1987), Posen (1984), Reiter (1996), Sagan (1993), Sikkink (1997), Snyder (1991), Stein (1994), and Weir and Skocpol (1985).

states and possess formal legal standing. Organizations that operate outside the rule of law—such as criminal enterprises and terrorist networks—have received scant attention from students of organizational learning. My goal is to develop a general theoretical explanation for how the learning capacities of these sovereignty free actors facilitate their defiance of state prerogatives, undermining government's ability to provide stability, order, and security for its citizens.

This research is also relevant to U.S. security interests, broadly defined.<sup>9</sup> The research has significant implications for existing U.S. drug and crime control policies in Colombia and other countries where transnational criminal organizations have become institutionalized, including Mexico, Russia, Italy, and Nigeria. The ability of criminal enterprises to alter their organizational structures and operations in response to law enforcement suggests that headhunting approaches to drug control, as exemplified in the Kingpin strategy, are unlikely to achieve satisfactory outcomes. This is not to suggest that such programs fail to impact trafficking organizations. Indeed, the Kingpin program demonstrated that when U.S. law enforcement and intelligence agencies coordinated effectively with their Andean counterparts cartel leaders could be apprehended and their

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<sup>9</sup> Some observers have legitimately questioned the trend by international relations scholars of labeling social problems such as the drug trade and crime "security" issues. As Michael Desch notes, "Broadening the definition of security in recent years was the result of the desire of many scholars and practitioners to direct more attention and resources to serious problems that previously had not received adequate consideration or money. As a rhetorical device for energizing scholarly and governmental discussion of, and directing attention to, the economic, environmental, social, and political problems affecting the post-Cold War Caribbean, this broader definition of security seems reasonable. But whether this rhetorical strategy will actually lead to a concerted effort to deal with these problems is unclear" (Desch 1998, p. 146). This point is well taken. However, two recent developments in Colombia and the U.S., have heightened the importance of this study to U.S. security concerns. The first development refers to the changing nature of the long-standing social conflict in Colombia, in which armed insurgents and paramilitaries have increased their participation in the drug trade in order to finance the escalation of their violent confrontation with each other and the Colombian state. This development produced alarm among Washington policymakers and led to substantial U.S. assistance for the Pastrana administration's controversial supply-reduction strategy, *Plan*

smuggling operations disrupted—at least temporarily. However, no sooner were these underworld luminaries removed than replacements emerged, eager to pick up where their predecessors left off. These post-cartel enterprises have learned from the mistakes of the groups that went before them, downsizing their operations to reduce their vulnerability to government anti-drug efforts. To the chagrin of state officials, existing groups have proven more difficult to investigate and dismantle, hampering law enforcers' ability to repeat the successes of the Kingpin strategy.

### Research Design

This is a comparative case study of the criminal enterprises that coordinate the illicit drug trade and the state drug enforcement agencies charged with disrupting these illegal activities. The basic objective of this research is to determine whether, and to what extent, these sovereignty-free and sovereignty-bound actors learn as organizations. Organizational learning refers to the process by which participants acquire, interpret, and apply knowledge to practices, rules, and procedures that guide organizational behavior. Organizational learning theory offers a framework for understanding the behavior of trafficking enterprises and law enforcement and intelligence agencies. This process-oriented approach illustrates how these state and non-state collectivities gather, analyze, and apply information to change their structures and operations in order to achieve satisfactory outcomes. Organizational learning also helps explain why trafficking enterprises are “better” learners than state agencies, and how the illicit drug industry persists in Colombia in spite of government successes in dismantling a number of leading cartels.

This case study is what Eckstein refers to as a “plausibility probe.” Plausibility probes are preliminary tests of candidate-theories, or in this case candidate-hypotheses, which are undertaken before more rigorous—and costly—cross-national tests are attempted (Eckstein, 1992, pp. 147-149). This probe is undertaken to determine whether the organizational learning proposition is worth further consideration in future studies of the international drug trade and transnational organized crime. If the proposition does not receive empirical support in the case of Colombian trafficking organizations, then it is unlikely to have explanatory value in other cases. This is because many Colombian enterprises are among the most sophisticated, highly organized criminal groups in the world. Moreover, the learning ecology within which they operate is intensely competitive, largely due to anti-drug pressure exerted by the U.S. and Colombian governments. If Colombian trafficking groups are not learning in this environment and if this process does not help explain their ability to undermine government efforts to stop them, then it is unlikely that the explanation would be valid in other cases where criminal organizations are less sophisticated.

To verify learning by trafficking enterprises and drug enforcement agencies, I must demonstrate that changes in practices, procedures, and performance programs are due to information processing, rather alternative considerations, such as power and environmental selection. The process-oriented model of learning used in this study necessitates an in-depth examination of how these collectivities function, rather than superficial “measurements” of improved task performance. Learning cases should

produce thick descriptions of how organizations acquire and manipulate information and experience.

To evaluate the explanatory power of organizational learning I have systematically gathered primary and secondary source data from a variety of sources in Colombia and the U.S. The theory of organizational learning and the method of structured, focused comparison guided data collection and analysis. I identify Colombian trafficking enterprises and U.S. and Colombian drug enforcement agencies as primary units of analysis that can be fruitfully studied through intra-case comparison.<sup>10</sup> From the learning literature I developed a semi-structured instrument for conducting interviews.<sup>11</sup> Questions address the acquisition, interpretation, and application of knowledge and experience by Colombian trafficking enterprises and government counter-narcotics agencies. Other questions focus on their organizational structures, routines, and practices. Using (non-probability) snowball-sampling techniques, I interviewed seventy-six U.S. and Colombian government officials, researchers, and former drug traffickers.<sup>12</sup>

I collected additional primary and secondary source data from government documents located at the National Archives in College Park, Maryland, the U.S. District Court in Miami, and several government offices and collections in Bogotá, Colombia. Secondary sources of information include government documents, transcripts

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<sup>10</sup> For discussion of the method of structured focused comparison, see George (1979), George & McKeown (1985), and King, Keohane & Verba (1994), especially p. 45. For discussion of intra-case comparison, see Lebow (2001).

<sup>11</sup> I chose the semi-structured interview format for their two principal strengths: structure and flexibility. The first ensures that all relevant topics will be covered during the course of interviews; the second allows researchers to pursue leads into other topics as they arise. For discussion of these issues, see Bernard (1995).

<sup>12</sup> The sample contained fifty-one government officials, many of whom worked in law enforcement agencies such as the Drug Enforcement Administration and the Colombian National Police, fourteen academic



and other court documents from the U.S. trials of prominent traffickers, memoirs of former traffickers and anti-drug agents, journalistic and academic studies, and newspaper accounts. These research methods have been applied in a number of studies on organized crime<sup>13</sup> and Colombian drug trafficking.<sup>14</sup> While there are an abundance of data available on the Colombian drug trade, these data are not always reliable. To minimize this problem, I cross-check information against independent, alternative accounts wherever possible and my own knowledge of the drug trade.<sup>15</sup>

### Overview of Study

The remainder of this study proceeds as follows. Chapter 2 lays the empirical foundation for additional analysis by tracing the evolution of the illicit drug industry in Colombia over the past seven decades. This historical narrative centers on the organizational forms that coordinate the Colombian drug trade, and the efforts by U.S. and Colombian drug enforcers to stop them. Chapter 3 provides the theoretical framework for the research. Following an extended treatment of this routine-based, process-oriented approach to organizational learning, I discuss alternative explanations for organizational change, including power and environmental selection. The chapter also emphasizes psychological, organizational, and environmental impediments to organizational learning, suggesting that learning cannot be presumed to exist *a priori* but requires sustained application to the units of analysis.

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researchers, six professional journalists, and five former participants that worked in different areas of the Colombian drug trade.

<sup>13</sup> See, for example, Abadinsky (1983), Adler (1993), and Reuter (1983).

<sup>14</sup> Arango (1988), Castillo (1991, 1996), Gugliotta and Leen (1989), and Krauthausen and Sarmiento (1991).

<sup>15</sup> For a discussion of crosschecking procedures used in conducting this type of research, see Adler (1993).

This application begins with an organizational analysis of the illicit drug industry in Colombia. Using an open-systems perspective of organization theory, Chapter 4 examines the tasks, environments, structures, participants, and technologies that together form Colombian trafficking enterprises. Having delineated the structural and environmental conditions of these criminal firms, Chapter 5 examines the extent to which they gather, interpret, and apply information to practices, procedures, and performance programs that guide collective behavior. In recognition that trafficking enterprises are not the only organizational learners of interest, Chapter 6 applies the process-oriented learning model to U.S. and Colombian drug enforcement agencies, in particular the Drug Enforcement Administration and the Colombian National Police. The chapter describes how these bureaucratic institutions develop, manufacture, and act on tactical and strategic intelligence regarding trafficking enterprises. The chapter also develops the notion of competitive learning games to describe interactions between these sovereignty-free and sovereignty-bound actors. Chapter 7 concludes the study by summarizing the theoretical and empirical findings of the research, and discussing the implications of competitive learning games for U.S. and Colombian drug control policies and programs.

## CHAPTER 2 HISTORICAL OVERVIEW OF THE ILLICIT DRUG INDUSTRY IN COLOMBIA

Conventional wisdom maintains that the Colombian drug industry is a recent phenomenon. A number of government reports, Congressional hearings, and journalistic and academic studies date the beginning of the Colombia's drug trade in the 1960s, or even the early 1970s.<sup>1</sup> Contrary to these accounts, Colombian smugglers have been involved in the transnational narcotics traffic since well before the 1960s. Indeed, criminal entrepreneurs have been smuggling cocaine and heroin from Colombia almost since national governments and international conventions formally banned these commodities. Since the 1930s, Colombian traffickers have built on their country's vibrant history in import and export contraband smuggling to organize for the purpose of participating in this illicit commerce.

This chapter presents an historical overview of the illicit drug industry in Colombia, focusing on the social organizations that produce, process, and export marijuana, cocaine, and heroin in Colombia. The chapter highlights the dynamic and fluid nature of these criminal enterprises, and lays the empirical foundation for the

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<sup>1</sup> In 1980, a Drug Enforcement Administration official testified before the U.S. Senate Subcommittee on Investigations that prior to the mid-1960s drug trafficking in Colombia was largely confined to importing cocaine for the *domestic* market and exporting small quantities of marijuana to neighboring countries (Clifford, 1980, p. 474). Several years later, the President's Commission on Organized Crime presented an influential report that traced Colombian involvement in the U.S. cocaine trade to the early 1960s (PCOC, 1986, p. 77). These views are accepted by a number of researchers that have written about the development of the Colombian drug trade, including MacDonald (1988, p. 27), Carney (2000, p. 8) and Chepesiuk (1999a, p. 56). In a recent edited volume on cocaine based on archival research, the contributor to the Colombia case study inexplicably dates the "formal appearance" of the country's cocaine industry to 1972 (Roldán, 1999, p. 176; also see Gootenberg, 1999).

chapters that follow. This chapter frames the evolution of the Colombian drug industry in five distinct, but overlapping, phases of development. Over the past seventy years, trafficking enterprises in Colombia have become increasingly sophisticated, increasing the challenge for U.S. and Colombian drug enforcement efforts. The chapter begins with a brief discussion of the country's long-standing tradition in contraband smuggling, and then proceeds through the different phases of the illicit drug industry. Within each period, attention is given to Colombia's position in the transnational drug trade and government efforts to dismantle trafficking enterprises.

### Colombian Smuggling Tradition

Transnational drug trafficking in Colombia has its roots in a long-tradition of contraband smuggling dating back to Colonialism, when Spanish authorities sought to regulate trade within their Latin American dependencies. During the 17<sup>th</sup> and 18<sup>th</sup> centuries, contraband smuggling was common throughout Nueva Granada, the area that encompasses contemporary Colombia. To avoid government duties and satisfy consumer demand, enterprising smugglers transported food, licor, cigarettes, machinery, and weapons across Riohacha, Santa Marta, and Cartagena. They also developed a number of maritime smuggling routes through Caribbean sea lanes (Dye, 1998; Grahn, 1997; Junguito & Caballero, 1982; López Restrepo & Camacho Guizado, 2001; Useche, 1997). In Nueva Granada, smugglers developed a number of practices to evade or co-opt law enforcement authorities.

they [smugglers] utilized specific strategies and schemes that corresponded to local conditions. Along unguarded coastlines, for example, smugglers sailed close to shore and deposited their goods at prearranged sites where buyers were waiting on the beach. In ports and near guarded anchorages, they used Spanish intermediaries to arrange deals and bribe local officials while they waited offshore... When local administrators threatened this illicit coastal trade,

smugglers transacted their business at sea, out of sight of roving ships and lookouts (Grahn, 1997, pp. 28-29).

While many countries in Latin America and the Caribbean have distinguished traditions in smuggling contraband imports, Colombia is one of the few countries in the region to have a long history in contraband exports as well. For centuries, criminal entrepreneurs based in Colombia have smuggled sugar, manufactured goods and livestock to other countries in Latin America, including Brazil, Ecuador, Peru and Venezuela. In recent decades, Colombian smugglers have established a flourishing trade in contraband coffee with numerous countries in order to bypass quotas established by the International Coffee Agreement.

However, the most significant drug-free contraband export has been illegal emeralds. For years, workers in loosely-controlled government mines have stolen emeralds, often under cover of nightfall, and sold them to emerald traders. These traders work within close-knit, clan-based organizations that rely on secrecy, loyalty, and coercion to run their illicit operations, attributes that would prove useful to those who later expanded into other illicit industries. Emerald smugglers also learned the mechanics of selling commodities on national and international black markets, laundering foreign exchange, and the importance of hiring *pistoleros* to provide security to their operations. Over time, a number of leading *esmeralderos*, such as Gonzalo Rodríguez Gacha, used the knowledge and capital they acquired in the emerald trade to expand into the production and exportation of marijuana and cocaine (Arango & Child, 1984, pp. 188-189; Krauthausen, 1998, pp. 138-139; López Restrepo 2000; Thoumi, 1995, p. 173; Thoumi, 1995, p. 173; Thoumi, 1992, p. 51; Betancourt & García, 1994, p. 106).

Emerald traders were not the only Colombian smugglers to expand into the illicit drug industry. In the 1960s and 1970s, a number of black marketeers in cigarettes, whiskey, and domestic appliances established themselves in marijuana and cocaine exports. Smugglers drew on contacts, customs, and capital they acquired in smuggling these commodities to diversify into marijuana and subsequently cocaine. The subsequent development of the marijuana and cocaine industry in Colombia was heavily influenced by the informal practices and procedures of these *contrabandistas* (Arango & Child, 1987, p. 130; Betancourt & García, 1994, p. 107; López Restrepo, 2000; Torres, 2000; Valdés, 2000; Valencia, 2000).

The re-emergence of the Colombian heroin trade in the 1990s was stimulated by well-established cocaine traffickers seeking to diversify their illicit activities (FBI 1993; Farah 1997; *Semana* 1999; Zabudoff interview). In all three cases, criminal entrepreneurs drew on previously acquired contacts, customs, and capital to establish themselves in more lucrative endeavors. This knowledge and experience was critical for smugglers operating within highly uncertain and even hazardous business environments.

#### Phase One—1930s: Colombia as Transit Point<sup>2</sup>

In the early 1930s reports of captured Colombian drug smugglers began to appear in U.S. government documents and Colombian press accounts. In 1932 a smuggler was captured in the Panama Canal Zone carrying 25 grams of cocaine hydrochloride hidden inside a cartridge belt. The individual claimed that he had acquired the drug from a group of traffickers operating in Cartagena, Colombia. The following year, a different smuggler was arrested in the Canal Zone carrying 100 grams of cocaine hydrochloride,

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<sup>2</sup> This section draws on the work of Eduardo Sáenz Rovner (1996, 1997), a Colombian economic historian that conducted archival research at the National Archives in Washington, D.C.

also allegedly obtained in Cartagena. The same year, *El Espectador*, a leading Colombian newspaper, reported that Colombian police officials confiscated a large consignment of illicit drugs in the home of a prominent *Bogotano*. A confidential U.S. State Department document from 1936 claimed that the Colombian islands of Providencia and San Andrés were being used by smugglers for exporting illicit drugs and alcohol to the U.S. (Sáenz Rovner, 1996, pp. 69-70).

Though sketchy in the details, these government documents and press reports suggest that a number of smugglers based in Colombia were involved in illicit transnational networks linking European drug producers with Caribbean and North American consumers. They also indicate that Colombian ports located on the Caribbean sea, including Barranquilla, Cartagena, and Santa Marta, were transshipment points for opiates and cocaine produced in Europe. Given the paucity of data, I cannot say much about the organizational forms involved in these criminal activities. Nor is it possible to draw direct linkages between these early pioneers and smuggling groups in later decades. However, it is clear that at least some trafficking was taking place in Colombia as early as the 1930s, during which time the country served as a significant transit point for international drug flows (Arango & Child, 1984, p. 176; López Restrepo & Camacho Guizado, 2001, pp. 3-4; Walker, 1989, pp. 75-76).

#### Government Drug Enforcement Efforts During Phase One

In the 1920s and 1930s the government of Colombia came to view the consumption of coca leaves by its citizens as a social problem (Walker, 1989, p. 73). Increased concern among national policy makers was reflected in a number of measures during this period. According to López Restrepo and Camacho Guizado, Law 11 of

September 15, 1920 was the first piece of national legislation outlawing the consumption, trade, and production of certain narcotics. Eighteen years later the Directorate of National Hygiene enacted Decree 95 to regulate the sale of coca leaves to licensed pharmacies. In July 1938, the Colombian government established a new penal code that increased the criminal penalties for transacting in opiates. One month later the Ministry of Work, Hygiene, and Welfare was created with the partial purpose of applying national-level regulations concerning the drug traffic that Colombia had accepted at international narcotics control conferences sponsored by the League of Nations (López Restrepo, 2000, p. 8; López Restrepo & Camacho Guizado, 2001, p. 3; Sáenz Rovner, 1996, p. 72).

In the mid-1930s, drug interdiction emerged as an active component of the U.S. government's counter-narcotics strategy. Prior to this U.S. drug enforcement largely consisted of local officials intercepting drugs in port cities, sometimes with the help of federal customs and counter-drug agents. The first, tentative steps towards the internationalization of American drug enforcement were sporadic Coast Guard patrols in Caribbean sea lanes and the Gulf of Mexico. As William Walker reports, additional efforts were made to conduct aerial surveillance near the U.S.-Mexican border, apparently without much success. In general, early drug enforcement activities conducted by the Colombian and U.S. governments were haphazard, sporadic, and failed to impede smugglers' access to morphine and cocaine supplies (Walker, 1989, pp. 57, 140-141; Walker, 1992, p. 269).

#### Phase Two—Late 1930s to early 1960s: From Transit Point to Producer

Colombia's role as a transit point in the international drug trade was not destined to last for long. As early as 1939 the U.S. Treasury Department reported that opium was



being grown on large extensions of Colombian territory and that cocaine was being processed in-country and exported to Panama. According to this confidential report, Colombians of German extraction processed cocaine for export and transported the product by train to Cartagena and then by automobile or pack animals to the Caribbean ports of Tolú, Cispatá, or Acandí, where it was hidden in banana boats and smuggled to Panama. Once in Panama, the drugs were transferred from steamship to small launches and transported to Puerto Pilón, where they were guarded by a group of German smugglers until it was feasible to transport the cargo by automobile to the Canal Zone (Sáenz Rovner, 1996, pp. 77-78).<sup>3</sup> During World War II, *contrabandistas* from the Urabá region of Colombia formed smuggling networks that transported illicit drugs, whiskey, and cigarettes through Panama and other Central American and Caribbean countries (López Restrepo, 2000; Walker, 1989).

Colombia's shift from transit point to drug producer was facilitated by Cuba's emergence in the international drug trade following World War II. In post-war Havana criminal organizations coordinated transnational networks composed of Latin American cocaine suppliers and French-Corsican and Italian heroin brokers. The networks used couriers, including seamen, stewards, passengers, and pilots, to smuggle drugs from South America to Cuba, sometimes by way of Central America. These human mules transported small quantities of coca paste in suitcases with specially modified compartments, a practice that remains popular among cocaine and heroin couriers today. In Cuba and Colombia processing groups refined the coca paste into cocaine hydrochloride, and sent along the finished product to the United States (MacDonald,

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<sup>3</sup> However, U.S. and Colombian officials disputed this report (Sáenz Rovner, 1996, pp. 78-83).

1988, pp. 27-28; Sáenz Rovner, 1996, p. 89; Treasury Department, "The Illicit Narcotic Traffic in Cuba"; Treasury Department, May 27, 1954).

#### Herran Olazaga Brothers Enterprise

In 1957 U.S. Federal Bureau of Investigation agents and Colombian police officials discovered a cocaine and heroin processing laboratory in Medellín. The processing lab was owned by a pair of Colombian twins that had been involved in the narcotics trade at least since 1948, over time developing into significant suppliers for Cuban trafficking groups. Rafael and Tomás Herran Olazaga ran their clandestine operation out of a furniture workshop that served as a front for their drug processing lab. The Herran Olazaga brothers purchased coca leaves from the Colombian department of Cauca and opium gum from Ecuador. They obtained the precursor chemicals used in the refining process through a nearby commercial drug lab that also served as cover. After processing, the brothers or their associates would smuggle the finished narcotics to Havana, where they would sell them to independent Cuban traffickers that would transport the drugs to the United States, Mexico, and other countries (Arango & Child, 1984, pp. 166-169; Montoya, 1959a, p. 3; Sáenz Rovner, 1996, p. 90).

The arrest of the Herran Olazaga brothers was important for law enforcement officials because it confirmed long-standing rumors that Colombian traffickers were smuggling narcotics into Cuba (Treasury Department). The case also indicates that Colombian traffickers were increasing their role in transnational drug networks. No longer were Colombian intermediaries merely purchasing cocaine and heroin from French and Italian traffickers and passing it onto to Italian-American and Cuban

traffickers located in Havana. At least a few Colombian traffickers had expanded into drug production.

### Other Phase Two Trafficking Groups

The Herran Olazaga brothers were not the only drug smugglers operating in the Antioquia region during this period. According to Arango and Child, by the mid-1950s a number of Colombian *contrabandistas* decided to enter the drug trade. In making the shift from black market cigarettes, alcohol, and domestic appliances to drugs, these illicit entrepreneurs drew on existing resources, including their practical knowledge of smuggling methods and Caribbean maritime routes, investment capital, Cuban-based “mafia contacts,” and Colombian-based drug chemists (Arango & Child, 1984, pp. 165-166).

In the early 1960s, the Venezuelan press began reporting about an “alarming invasion” of cocaine, heroin, and marijuana, much of it originating in Colombia. A number of smuggling rings transported drugs from Colombia into Venezuela by means of go-fast motor boats. At least one group of Colombian smugglers was affiliated with the well-known Italian *mafiosi*, Lucky Luciano. Unlike other rings, Luciano’s group preferred to move its contraband into Venezuela through ground transportation. The cross border traffic was facilitated by numerous well-equipped processing laboratories in Medellín run by “German technicians” (*El Espectador*, 1961a, p. 3).

While the Venezuelan press was reporting about the invasion of Colombian drugs, *El Espectador* published several articles detailing the growing traffic and consumption of marijuana in Colombia. Although marijuana had been produced in Colombia since the times of the Spanish conquest, consumption of the drug was generally concentrated

among socially marginal groups located in port cities and the sugar growing regions of Valle del Cauca. According to Thoumi, increases in domestic demand in the late 1950s and 1960s stimulated greater production of *la mala hierba*. A series of arrests by Colombian police officials in the summer of 1961 demonstrated the existence of an organized, city-wide network of marijuana traffickers in Bogotá (*El Espectador*, 1961b, p. 9; *El Espectador*, 1961c, p. 9; *El Espectador*, 1961d, p. 9; *El Espectador*, 1961e, p. 9; Thoumi, 1995, p. 126).

#### Government Drug Enforcement Efforts During Phase Two

Due to the lack of data regarding drug enforcement outputs during this period, such as numbers of participants arrested and kilograms of drugs seized, it is difficult to assess the effectiveness of government counter-narcotics efforts. By the 1960s, officials from both countries expressed concern at Colombia's growing role in supplying transnational drug networks. However, drug enforcement programs in Colombia during this period were not particularly successful. In the aftermath of *la Violencia*, Colombian police and military authorities had more pressing concerns than stopping the drug trade, such as reducing political violence in the countryside (Walker, 1999, p. 146; Arango & Child, 1988, pp. 169-170). When drug-related arrests were made, the perpetrators were often low-level street dealers and drug addicts, ineffective targets for dismantling growing trafficking networks.

The fate of the Herran Olazaga brothers following their arrest in Cuba is indicative of the failure of drug enforcement efforts during these years. Rafael Herran Olazaga fled Cuba immediately after posting bond from his 1956 arrest. While brother Tomás was eventually found guilty of drug trafficking, he served only one year in a

Cuban penitentiary before returning to Medellín. In subsequent years, law enforcement authorities suspected the two brothers of continuing their illicit drug activities from Colombia. However, they apparently avoided further prosecution. According to Arango and Child, the Antioquian trafficker died a successful businessman, owner of motels and several food establishments (Arango & Child, 1984, p. 169; Treasury Department).

### Phase Three—Mid-1960s to late 1970s: Expansion of Colombian Drug Industry

In the mid and late 1960s the involvement of Colombian smuggling groups in the international drug trade continued to expand. After the fall of the Batista regime in Cuba a number of Cuban and Italian-American organized crime figures based in Havana fled the island for the United States. While some of these traffickers remained active in the drug trade, Cuba's value as a transit point was much diminished. Colombian smugglers with strong connections to Cuban trafficking networks found themselves well positioned to take advantage of this development. By 1965, Colombian trafficking enterprises were providing almost the entire cocaine supply for U.S.-based Cuban smugglers. Also during this period, Colombian smugglers supplied cocaine and marijuana to American, Chilean, and Mexican traffickers (Betancourt & García, 1994, p. 57; Cervantes, 1980; Clifford, 1980, p. 474; Gugliotta & Leen, 1989, p. 22; Jonnes, 1996, p. 338; MacDonald, 1988, p. 28; President's Commission on Organized Crime [PCOC], 1986, pp. 77-78; Ruíz Hernández, 1979; Sabbag, 1990; Thoumi, 1995, p. 126; U.S. House, 1977, pp. 3, 19;).

In the late 1960s and early 1970s, Colombian traffickers established their own transportation routes and wholesale distribution networks in the U.S. and Europe. Smugglers drew on their previous experiences and knowledge in trafficking illicit drugs and other contraband goods. A number of whiskey, cigarette and marijuana smugglers

from the Antioquia and Guajira regions used their skills, contacts, and capital to enter the cocaine business in the 1970s. Enterprising *marimberos* and *contrabandistas* discovered that the smuggling infrastructures and methods used to transport marijuana to the United States worked well for cocaine. Marijuana distribution networks converted easily to cocaine. A number of *marimberos* made the switch gradually by pigbacking small quantities of cocaine on their marijuana loads and obligating their U.S. distributors to sell both products. Transportation methods used by marijuana smugglers, such as flying private planes of various sizes to clandestine airstrips along the Atlantic Colombian coast, loading them with drugs, and returning to the U.S. with the illicit cargo, also adapted easily to cocaine trafficking. Indeed, a number of smuggling innovations pioneered by *marimberos* later became popular among cocaine traffickers, such as air dropping specially wrapped packages of marijuana in the Caribbean sea, and using large seafaring freighters, known as “mother ships,” to transport huge quantities (upwards of 100 tons) of marijuana to prearranged locations 200 miles off the U.S. coastline, where private yachts and go-fast motor boats would converge on the mother ship, receive and transport smaller quantities into the U.S. (Cervantes, 1980, pp. 47-48; Krauthausen & Sarmiento, 1991, p. 147; MacDonald, 1988, p. 28; Nieves, 1997, p. 3; Passic 2000; PCOC, 1986, p. 78; Velásquez Romero, 2000; Valdés 2000).

By the mid-1970s, Colombian trafficking enterprises were recognized as preeminent players in the inter-American cocaine industry. In a short period of time, they transformed themselves from mere intermediaries for trafficking groups based in other countries to vertically integrated, production-transportation-wholesale distribution networks. Along the way Colombian enterprises developed practices, procedures, and

technologies for producing and transporting illicit drugs that would be used over the next two decades. Small, makeshift laboratories processed coca paste into cocaine hydrochloride. Human couriers, private aviation aircraft, and maritime vessels transported drugs across the Caribbean by sea or air. Navigation technology located drug drop-off points in the high seas. Sophisticated communications equipment, including Bearcat scanners, CB, VHF and single side band radios, marine radios, and telephone paging systems, were used to communicate within smuggling groups and to monitor law enforcement activities (Cervantes, 1980, pp. 80-81; Martin, 1978, p. 61; Battard, 1978, p. 75; U.S. House, 1977, p. 9; Wille, 1978, p. 88).

The development of Colombian trafficking enterprises did not go unnoticed by state authorities. By the mid-1970s, U.S. drug enforcers were alarmed at the growth of Colombian wholesale distribution rings operating in New York, Miami, and other large urban markets. In New York City, several Colombian organizations were believed to control the cocaine trade in Queens and Manhattan. These groups, led by such mythical figures as Benjamin "the Black Pope" Herrera, Griselda "the Black widow" Blanco, and Veronica "the queen of cocaine" Rivera, developed many of the smuggling practices and procedures that the cocaine cartels would refine and make famous ten years later (Nieves, 1997, p. 5; *Semana* 1987). The following sections briefly describe the structure and modus operandi of two of these enterprises.

#### Herrera Enterprise

The Herrera trafficking network was based in Cali, Colombia, and led by Benjamin Herrera, the son of an alleged cocaine chemist who had been involved in the drug trade for a number of years. This family enterprise featured numerous brothers,

sisters, cousins, and in-laws as participants. However, the Herreras also recruited outside the family for professionally trained participants. In all, the network contained more than ninety members and exported approximately forty kilograms of cocaine a month to New York and Miami. The Herreras acquired coca paste in Bolivia, Ecuador, and Peru. Using human couriers carrying ordinary suitcases, the enterprise transported it to international airports in Cali and Bogotá, where the couriers whisked past compliant customs officials "on the organization's payroll." The coca paste was then transported to one of several processing laboratories owned by the organization, where it would be processed into cocaine hydrochloride. One processing lab captured by Colombian authorities outside of Cali contained a twenty-five ton mechanical press for packing cocaine into fine sheets and other equipment, materials and precursor chemicals worth approximately US\$800,000. Among the eight persons arrested at this lab was a chemistry professor from Santiago University in Cali (Gage, 1975a, p. 26; Gugliotta, 1987; Moreau, 1976; *Semana*, 1987).

Fully refined cocaine was distributed to one of three Herreras operating in Barranquilla, Bogotá, or Medellín. These transporters would export the drug to the U.S., again relying on drug-running couriers holding small quantities, generally between two and four kilos. Couriers sometimes posed as students, carrying books that contained cocaine secreted sheets. These "students" were paid between US\$ 500 and US\$ 1,000 per trip, plus expenses and a new suit of clothes to be used when transporting their pedagogical materials to New York. False documents, including student visas, were obtained by a family member that also served as a "liaison" with several of the network's U.S.-based buyers. In addition to customs officials, the enterprise also received



protection from officials in the Colombian police and judiciary, as well as “leading members of Colombian society” that invested in cocaine shipments (Gage, 1975a, p. 26).

### Bravo Enterprise

The Bravo network contained several large and loosely connected drug rings that smuggled large quantities of cocaine, heroin, and marijuana from Colombia to the U.S. From 1972 to 1974, the Bravo enterprise distributed drug shipments throughout North America, including Manhattan, Queens, Miami, Los Angeles, San Antonio, Texas and Toronto. Large cocaine shipments, which in those days meant anything greater than four kilos, were transported in containerized cargo, speed boats, and private planes using a variety of routes, including Panama, Mexico, Puerto Rico, Canada, and even Munich, West Germany. Smaller quantities of cocaine and heroin were hidden inside luggage or clothes and transported by couriers. The Bravo network developed a number of creative smuggling methods, including soaking clothes in a liquid solution of cocaine hydrochloride, swallowing drug-filled prophylactic condoms, and hiding cocaine in false-bottomed wine bottles, painting frames, hollow ski poles and wooden hangars, specially modified bras and girdles, and a dog cage, complete with live canine. On reaching the U.S., the cocaine was distributed by members of the Bravo network, which included approximately 150 couriers, brokers, and distributors working in the New York metropolitan area alone. Although U.S. police officials eventually captured, prosecuted and convicted over a dozen members of what federal prosecutors described as “the biggest Colombian narcotics organization ever uncovered,” several entrepreneurs, including Alberto Bravo, Carlos Bravo and Griselda Blanco, were able to continue their

operations from Colombia (Gage, 1975b, p. 24; Hudson, 1974, pp. 1 & 18; Lubasch, 1976, p. 21; *New York Times*, 1976, p. 20; Nieves, 1997, p. 5).

### Government Drug Enforcement Efforts During Phase Three

In response to the growth of Colombian trafficking enterprises, the U.S. and Colombian governments increased their drug enforcement activities, achieving a number of successes in the latter half of the 1970s. Police agencies from both countries conducted criminal investigations that disrupted several trafficking enterprises. Dozens of participants from the Herrera and Bravo networks were captured, prosecuted, and convicted of drug-related offenses. In 1975, in what amounted to the largest cocaine seizure to date, Colombian police officials captured 600 kilograms of cocaine in a small plane at the Cali airport (Frontline, 2000).

Notwithstanding these achievements, drug enforcement in Colombia was inconsistent during this period, as reflected in the wide disparity of annual performance indicators (see Table 2-1 below). For the entire year following the Cali airport bust, Colombian officials managed to capture only 138 kilograms of cocaine. In 1977, the amount of cocaine captured by Colombian authorities sunk to a dismal 32 kilograms. In the U.S., complex conspiracy cases targeting cocaine operations, such as the Herrera and Bravo networks, were few and far between. In the 1970s, many drug enforcement managers were wary of these resource-heavy investigations, preferring low-cost “buy-bust” operations targeting street dealers (CNP, 2000, p. 540; Nieves, 1997, p. 5).<sup>4</sup>

Drug enforcers mediocre counter-cocaine performance during the 1970s reflected a widespread belief among U.S. and Colombian policy makers and police officials that marijuana, rather than cocaine, was the primary drug threat facing their respective

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<sup>4</sup> Buy-bust operations are discussed in detail in Chapter 6.

countries. Consequently, drug enforcement resources were directed towards eradicating Colombia's booming marijuana industry. The year of the Cali cocaine bust, Colombian authorities captured 78,000 kilograms of *cannabis* and destroyed almost 1.5 million marijuana plants. In 1977, the year Colombian officials netted 32 kilograms of cocaine, they also captured 187,077 kilograms of marijuana (see Table 2-1).

Table 2-1 Colombian Drug Enforcement Indicators, 1974-1979

Year	Persons apprehended	Cocaine interdicted (kilograms)	Marijuana interdicted (kilograms)	Coca plants destroyed	Marijuana plants destroyed	Drug labs destroyed
1974	1,305	164	90,000	0	37,500	6
1975	1,484	699	78,000	0	1,494,000	10
1976	769	138	27,000	0	25,000	15
1977	945	32	187,077	1,000	805,700	14
1978	555	194	158,272	4,195	431,614	34
1979	457	1,252	325,656	185,700	398,255	30

Source: CNP (2000)

Even regarding marijuana there was ambivalence among Colombian and U.S. policy makers during much of the 1970s. In neither country did large groups of citizens view marijuana consumption as a significant public health problem, and in Colombia at least political elites did not see the growing drug industry as a threat to the country's national security interests. In the mid-1970s, when officials from the Ford and Carter administrations pressured their Colombian counterparts about drug trafficking within their national borders, Colombian President Alfonso López Michelsen was quick to remind them that U.S. consumers rather than Colombian suppliers represented the source of the problem. Even within the U.S. policy community officials disagreed over the degree to which the drug trade, in particular marijuana, threatened U.S. interests. President Nixon's fight against crime agenda produced some changes in federal drug enforcement policy (see Chapter 6), but the widespread moral fervor associated with the cocaine wars

remained several years away (Massing, 1998; Randall, 1992, p. 246; Tokatlian, 1988, p. 139; Tokatlian, 1990, pp. 293-294; Walker, 1999, pp. 148-149).

Notwithstanding this ambivalence, the 1970s witnessed an increase in the U.S. government's drug enforcement presence in Colombia. Prior to the Nixon Administration, U.S. drug enforcers, including the FBI and the Bureau of Narcotics and Dangerous Drugs, operated sporadically, on a case-by-case basis, in South America. With the creation of the Drug Enforcement Administration in 1973, the Nixon Administration ushered in a new era of the internationalization of U.S. drug enforcement policy. By the late 1970s, the new "super" drug enforcement bureau was active in dozens of countries, and established a permanent presence in Colombia, working closely with the Colombian National Police (CNP) (Nadelmann, 1993).

With the change of Colombian presidential administrations in August 1978, the Colombian government's attitude towards drug trafficking shifted. President Julio Turbay implemented a more aggressive counter-narcotics policy than his predecessors following allegations in the U.S. media that two of his ministers and his own family were connected to the illicit drug industry. Following his inauguration, President Turbay placed the Guajira Peninsula, which had long served as a major production center for marijuana and transit point for marijuana and cocaine, under the jurisdiction of Colombia's armed forces. By the end of 1978, 10,000 army troops were in the region engaged in the manual eradication of marijuana. Operation Fulminant, as the anti-drug mission was called, produced immediate results: 3,500 tons of marijuana were seized, which represented an estimated loss of US\$ 70 million to Colombian smugglers, approximately seventy drug running airplanes and seventy seafaring vessels were

captured, and 1,000 Colombians and Americans were arrested (Krause, 1979; Thoumi, 1995, p. 210; Walker, 1999, p. 150).

Following on the heels of the DEA's Operation Stopgap, which targeted Colombian and American marijuana smugglers in the Caribbean, Fulminant temporarily disrupted the marijuana industry in Colombia. However, the operation was short lived, in part due to a lack of support from the Colombian military. The generals were concerned that too many resources were being shifted away from more pressing anti-guerrilla operations. They also worried about the debilitating impact of drug-related corruption on field officers involved in Fulminant (Orjuela, 1990, p. 218).

However, the most significant impact of the marijuana eradication and interdiction campaigns undertaken by U.S. and Colombian drug enforcers in the late 1970s was an unintended one. In successfully targeting a number of leading *marimberos*, Operations Fulminant and Stopgap substantially increased the risks and costs associated with marijuana trafficking. Given limited state resources, cocaine did not receive as much attention from drug enforcers as marijuana, providing an additional incentive for smugglers to diversify into cocaine.<sup>5</sup> Many of those with sufficient capital, contacts, and knowledge did, transferring their marijuana smuggling expertise to the more lucrative cocaine trade. In this respect, short-sighted government drug enforcement policies and programs that focused on marijuana trafficking helped set the stage for the dramatic increase in cocaine trafficking over the next decade (Betancourt & García, 1994; Cannon, 1979; Krauthausen & Sarmiento, 1991; Orjuela, 1990, p. 218; O'Toole, 1978).

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<sup>5</sup> Apart from increased marijuana drug enforcement, there were other incentives to switch to cocaine trafficking. For one thing, cocaine was less aromatic than marijuana, making it easier to hide and transport. Also, per unit profits for cocaine were substantially greater than for marijuana, reducing the need to transport such large quantities to ensure adequate profits.

#### Phase Four—1980s-mid 1990s: Rise and Fall of the “Cartels”

By the early 1980s a number of Colombian trafficking organizations were organizing large-scale cocaine shipments from South America to the United States and Europe. These criminal enterprises provided a measure of coordination to what had been a highly fragmented industry. At the zenith of this transnational production-transportation-marketing structure stood several vertically integrated “core” organizations that, according to one estimate, supplied over sixty percent of the cocaine reaching U.S. and European drug markets. Size varied considerably among different core organizations. Small core enterprises were composed of anywhere from two dozen to a hundred members, while large organizations contained several hundred members. Participants were compartmentalized into discrete units, organized along functional lines, such as drug processing, transportation, and wholesale distribution. Core organizations generally contained three or more levels of management, with at least two layers insulating leaders from the activities of rank-and-file workers (PCOC, 1986, pp. 100-101; Thompson, 2000; Vargas, 2000; Zabudoff, 1997, p. 24).

The core organizations transformed the Colombian drug industry by coordinating international cocaine shipments that measured in metric tons rather than kilograms. To do so, they relied on networks of hundreds of individuals and groups that provided specialized goods and services. Independent suppliers from Bolivia and Peru provided coca paste, a semi-processed form of cocaine, which was often transported to Colombia for further processing. In completing the cocaine refining process, some Colombian core organizations owned their own processing laboratories, while others subcontracted processing services to independent groups of chemists that operated hundreds of

“kitchen” labs outside of Medellín, Cali, or Bogotá. On occasion different organizations pooled resources to develop large-scale cocaine refining operations, such as the infamous Tranquilandia complex that was discovered and destroyed by Colombian authorities in 1984. In certain regions of Colombia left-wing guerrilla “fronts” and paramilitary groups provided protection for cocaine processing labs. Small trafficking groups and individuals were recruited to help finance large-scale shipments and share the risk associated with government interdiction efforts. American pilots were often hired to transport the finished product to consumer markets in the U.S. and Europe. Independent money launderers were contracted to repatriate illicit profits. In this manner, core organizations ‘outsourced’ numerous activities to independent groups linked in *ad hoc* support networks. Participation in these networks was rather fluid: Depending on the needs and circumstances involved in each shipment, core organizations could choose from among different suppliers, processors, transporters, and financiers (Castillo, 1996; Diehl, 1982; Morgenthau, 1989, p. 23; Juan David Ochoa, 2000; Thoumi, 1999; Zabludoff, 1997, p. 25).

Core enterprises focused on enforcing agreements among network participants, providing security for trafficking operations, gathering intelligence on government drug enforcement efforts, and protecting leaders’ political and economic interests.<sup>6</sup> Several core organizations also maintained distribution “cells” in the U.S. responsible for receiving drug shipments, storing merchandise in warehouses or stash houses, distributing cocaine at the wholesale level, and shipping revenues back to Colombia. However, the core organizations functioned more as voluntary export associations and

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<sup>6</sup> To perform these functions core enterprises relied on the use of intimidation and violence.

interest groups than monolithic firms (Clawson & Lee, 1996, pp. 39-40; Krauthausen & Sarmiento, 1991; Lee, 1991, p. 14; Zabludoff, 1997, pp. 23-26; Zabludoff, 2000).

### Emergence of the Core Organizations

Core trafficking organizations and their support networks did not spring up overnight. Rather, they developed over time as their leaders acquired experience, contacts, and knowledge in a variety of criminal endeavors, including smuggling contraband goods, robbing cars, even kidnapping. The largest, and most well-known, core organizations were led by entrepreneurs based in Medellín and Cali. During the 1980s and 1990s, such figures as Pablo Escobar Gaviria, Carlos Lehder Rivas, Gonzalo Rodríguez Gacha, José Santacruz Londoño, and the Ochoa and Rodríguez Orejuela brothers became household names as Colombian and American journalists assiduously chronicled their criminal exploits.<sup>7</sup>

Many of the leaders of the Medellín and Cali core enterprises began their delictive careers working as low-level members for established criminal gangs. In the early 1970s, three of the future leaders of the Cali-based cocaine network, Gilberto and Miguel Rodríguez Orejuela and José Santacruz Londoño, worked as foot soldiers in a Cali criminal gang known as *Los Chemas*. This gang was primarily involved in kidnapping and counterfeiting but gradually expanded into smuggling cocaine base from Bolivia and Peru and converting it into cocaine hydrochloride in Colombia (Castillo, 1987, pp. 41-42; DEA, 1994b, p. 1).

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<sup>7</sup> Due to the fascination of the Colombian and U.S. media and public with the Medellín and Cali core organizations an enormous body of literature emerged in the 1980s and 1990s, much of it written by journalists more interested in dramatization and hyperbole than scientific analysis. Some of the more well-known journalistic accounts, in both English and Spanish, include: Cañón (1994), Castillo (1987, 1991, 1996), Castro-Caycedo (1996b), Cervantes (1980), Cortés (1993), Duzán (1994), Eddy *et al.* (1988), Freemantle (1985), Giraldo (1992), Gugliotta and Leen (1989), Mermelstein (1990), Mills (1986), Reyes (1999), Rice (1989), Rincón (1990, 1994), Shannon (1988), Torres (1995), Torres & Sarmiento (1998).



Also in the early 1970s Pablo Escobar, who would emerge a decade later as one of the leaders of the Medellín cocaine network, worked as an enforcer for a contraband smuggler that specialized in whiskey, cigarettes, watches, and second-hand pianos. In an interview with a Colombian journalist, Escobar referred to this *contrabandista* as his “maestro,” from whom he learned the smuggling business (Castro Caycedo, 1996a, p. 284). Around 1975 the ambitious Escobar became involved in cocaine trafficking, organizing small-scale smuggling ventures. Through contacts and intermediaries he arranged for the purchase of kilo quantities of cocaine hydrochloride from an Ecuadorian supplier, and transported the drug to the United States through human couriers. In 1976 he was arrested by Colombian authorities near Medellín for transporting thirty-nine kilograms of cocaine hidden inside the spare tire of a truck. Escobar was never successfully prosecuted for this charge, and later in the decade convinced Fabio Ochoa, an experienced contraband smuggler, “to use his well-established and well-connected smuggling routes for the more profitable drug business” (Chepesiuk, 1999a, p. 142). The old-time *contrabandista* apparently agreed and a business partnership gradually emerged between the senior Ochoa, his three sons, and Escobar. This joint venture endured for a number of years and, along with the participation of other leading traffickers, formed the basis of what later became known as the Medellín “cartel” (Cañón, 1994, pp. 59-60; Castillo, 1987, p. 60; Kraar, 1988, p. 34).

However, this partnership never functioned as a cartel in the strict sense that economists use the term. Rather Escobar and the Ochoas pooled their criminal resources, divided responsibilities, and coordinated large-scale cocaine shipments to American and

European markets.<sup>8</sup> As the size of their trafficking venture grew they gradually absorbed or co-opted the smuggling operations of several of the “pioneering” trafficking groups operating in the 1970s (Gugliotta, 1987; PCOC, 1986, pp. 101-103; Valdés, 2000).

Similar arrangements developed between different core enterprises in the Cali-based network, including the Rodríguez-Orejuela, Santacruz Londoño, and Herrera Buitrago groups. Although the leaders of these separate groups ran their own smuggling operations with their own personnel, they collaborated extensively on strategic matters affecting the entire network, such as infiltrating the different security agencies of the Colombian state or corrupting well-placed Colombian congressmen sympathetic to their political and economic interests, such as outlawing the extradition of Colombian nationals. Moreover, on occasion, low-level workers for one core organization, such as cocaine chemists, truck drivers, or merchandise off-loaders, would be put to work for another core group, without the workers’ knowledge that the ultimate locus of authority had changed (Torres & Sarmiento, 1998; Velásquez Romero, 2000).

#### Smuggling Methods of Core Organizations

Core enterprises used a variety of methods for transporting cocaine from South America to U.S. and European drug markets. A number of core organizations continued the practice of using human couriers to smuggle cocaine. Although the quantities smuggled by individual couriers remained small, generally less than four kilograms, core enterprises had large numbers of participants at their disposal. In an effort to overwhelm law enforcement authorities, now wise to this time-honored smuggling method, some

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<sup>8</sup> Medellín core organizations also absorbed the smuggling operations of several of the “pioneering” trafficking groups operating in the 1970s. When Manuel Garcés was sentenced to jail in Colombia, the Escobar organization took over his smuggling routes and operations (Valdés interview). When Benjamin Herrera was paroled from a U.S. federal prison in 1975, he returned to South America and collaborated with the Medellín core organizations (Gugliotta, 1987).

commercial flights contained as many as many as seventeen drug-running mules. Organizers overloaded the planes with mules with the expectation that drug enforcers would identify and apprehend several, which was considered acceptable as long as the majority cleared Customs. Couriers continued to use false-bottomed suitcases to smuggle drugs, as well as dog cages, hollow coat hangars, and specially designed bras and girdles. In addition to these 'external body' carries, large numbers of Colombian couriers ingested balloons or condoms containing small amounts of cocaine (DEA 1993, p. 18; Raab, 1984; Ramos, 1985).

However, the bulk of cocaine transported by the core organizations was through general aviation aircraft and maritime vessels. A number of core enterprises outsourced air transportation services drug-running American pilots and support personnel. These transportation rings used light twin engine aircraft, such as Gulfstream Aero Commanders, Beechcraft King Air 300s, Piper Navajos, Aztecs and Cheyennes, and Cessna 400s and Conquest IIs, to transport several hundred kilos of cocaine over a range of approximately 1,800 miles. Many planes were equipped with rubber fuel "bladders" for traveling long distances without the need to refuel, along with radar detectors and radio scanners for tracking government planes and seafaring vessels on drug patrol. In the 1990s, some Cali core organizations were using "large, long-range, multi-engine" aircraft, such as Convair 580s and Boeing 727s, to smuggle several tons of cocaine into Mexico and Canada. For smaller planes that required refueling, smuggling networks relied on a number of transshipment points in Mexico, Central America, and the Caribbean where drug-running pilots could land and, for a hefty commission, refuel.<sup>9</sup>

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<sup>9</sup> One of the leaders of the Medellín-based smuggling network, Carlos Lehder, maintained a transshipment point on Norman's Cay, a small island in the Bahamas where he owned several properties. In exchange for

While some transshipment points were merely refueling stations, others contained small crews of workers that off-loaded and repackaged cocaine shipments. In Mexico a number of trafficking groups with marijuana and heroin smuggling experience provided this service, breaking down the cocaine into smaller shipments and transporting it through Mexico in automobiles and trucks (DEA, 1993, p. 17; DEA, 1994b, p. 7; Mermelstein, 1990; Pallomari, 1997; PCOC, 1986, pp. 88-89, 98; Raab, 1984; Rice, 1989, pp. 145-146).

Maritime smuggling was conducted by seafaring vessels of various types and transportation capacities, including high-speed "cigarette" or go-fast boats, sport fisherman's boats, yachts, medium-sized commercial fishing boats, large, dilapidated freighters, and even what the DEA identified to as "submarine-like semi-submersible vessels" capable of transporting hundred kilogram quantities of cocaine through the Caribbean (DEA, 1994b, p. 7). Maritime vessels often departed from commercial ports in Colombia, such as Buenaventura, Barranquilla and Cartagena, as well as hundreds of clandestine debarkation points located along the country's northern coast. On smaller boats, cocaine was hidden in customized storage compartments, with the vessels frequently modified for this purpose. On large freight ships, the drug was hidden within containerized cargo shipments, including blue jeans, ceramic floor tiles, fresh cut flowers, fruits and vegetables, fish, coffee, lumber, concrete posts, blue jeans, and dozens of other exports from South America (Maitland, 1981; Griffith, 1997, p. 81; Castillo, 1996, p. 51; Mermelstein, 1990, p. 146; Néstor, 2000).

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a commission, Lehder allowed independent cocaine and marijuana smugglers as well as those associated with the Medellín network to land and refuel before continuing to the United States. For a description of Lehder's operation, see Gugliotta & Leen (1989) and Shannon (1988). Also, see the interview granted by Jorge Luis Ochoa (2000) to *Frontline*.

In reflection of the smuggling capacity of the core enterprises, in the 1980s U.S. and Colombian authorities began to discover containerized shipments and stash houses containing several tons of cocaine hydrochloride. As early as March 1982 U.S. Customs authorities discovered 3,096 pounds (or 1.38 tons) of cocaine mixed in mixed in a shipment of hundreds of cartons of clothing apparel. The cocaine was wrapped with yellow plastic in one-kilo packages bearing different coded markings. According to DEA investigators the load belonged to fifteen different trafficking organizations, including the Ochoa and Escobar groups. In 1989, DEA and Customs agents discovered approximately 12,000 pounds (5.35 tons) of cocaine hidden inside drums of powdered lye. The cocaine, wrapped in red, yellow and blue plastic and marked with the code name Baby I, was discovered at a warehouse in Queens, New York used by a trafficking ring associated with the Cali-based trafficking network. Also in 1989, U.S. authorities confiscated cocaine shipments of 11,200 pounds (5 tons) on a Panamanian freighter in the Gulf of Mexico, 20,160 pounds (9 tons) hidden in a stash house in Texas, and 44,800 pounds (20 tons) in an unguarded warehouse near Los Angeles. The latter seizure remains the largest ever recorded in the United States. Two years later, DEA and Customs officials discovered 26,880 pounds (12 tons) of cocaine hidden inside concrete fence posts and cornerstones. In 1994, federal authorities uncovered 8,000 pounds (3.57 tons) of cocaine hidden inside empty barrels in a tractor-trailer truck in Texas (Dillow, 1994; Gugliotta & Leen, 1989, pp. 71-73; Isikoff, 1991; McKinley, 1989).

#### Diversifying to Heroin

At some point during the 1980s several core enterprises expanded into the heroin business. It is believed that this development was driven by the same factors that caused

numerous *marimberos* to diversify into cocaine in the preceding decade, including the growing risks associated with cocaine trafficking due to successful drug enforcement efforts, and the greater per unit profitability of heroin. In addition, traffickers may have been attracted by profitable European drug markets, where heroin distribution networks were well-established, and law enforcement efforts posed fewer risks to drug smugglers. In 1994, the DEA reported that core organizations led by the Ochoa brothers and Leonidas Vargas Vargas were using their cocaine networks to smuggle heroin. The same report claimed that the Rodríguez Orejuela brothers and Helmer Herrera Buitrago had also invested in the heroin industry. Two other core organizations associated with the Cali network, the Santacruz Londoño and the Urdinola Grajales groups, began experimenting with heroin production in the early 1980s, and supplied Colombian farmers with the necessary inputs necessary to cultivate opium. According to a former director of the Colombian National Police (CNP), Santacruz Londoño brought Afghani and Pakistani opium cultivators to Colombia in order to learn how to cultivate opium poppies. Since then Colombia has become a major source of heroin to the U.S., supplying a higher grade product that many U.S. consumers favor over Southeast Asian heroin (DEA, 1994a, p. 6; Farah, 1997; Farah, 1999; FBI, 1993, p. 21; Moore & Farah, 1998; *Revista Cambio* 16, 1999; *Semana*, 1999; Serrano Cadena, 1999, pp. 50-51; "Statement of Witness," 1989, p. 11; Zabludoff, 1999).

#### Government Drug Enforcement Efforts During Phase Four

Throughout the 1980s and the 1990s the U.S. and Colombian governments directed considerable resources towards dismantling the core cocaine organizations. While bilateral cooperation between the two countries was occasionally marred by

substantive disagreement over a number of policy issues, particularly extradition, the two governments worked together to implement a variety of supply-reduction programs targeting the Medellín and Cali-based trafficking networks.

During this period the Colombian government engaged in a series of “crackdowns” directed at the leaders of the Medellín-based trafficking enterprises and subsequently the Cali organizations. Several crackdowns were undertaken in response to specific criminal acts attributed to Medellín trafficking groups, such as the assassination of Rodrigo Lara Bonilla, the Colombian Minister of Justice, in 1984.<sup>10</sup> Each time Colombian authorities responded by carrying out dozens of raids against the properties of leading Medellín traffickers, destroying processing laboratories, seizing cocaine and money, apprehending low and mid-level participants in these criminal enterprises. However, the leaders remained beyond the reach of drug enforcers, developing sophisticated security arrangements allowing them to evade government efforts. After several weeks, the crackdowns would subside, and traffickers could return to business as usual (Gugliotta, 1992, pp. 122-123; Matthiesen, 2000).

In 1989 Colombian president Virgilio Barco launched a fourth crackdown in response to the assassination the leading presidential candidate for the 1990 general elections, by *sicarios* (paid assassins) working for the Medellín traffickers. By this point, the Colombian president and other political elites were convinced that the Medellín organizations presented a legitimate threat to the country’s political system. In a televised address, President Barco declared a nationwide state of siege against the traffickers. At the behest of President Bush, the U.S. offered their beleaguered drug war

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<sup>10</sup> Bonilla’s assassination was carried out in retaliation for his role in planning a police raid on the *Tranquilandia* cocaine refining complex owned by several leaders of the Medellín smuggling network (Gugliotta & Leen, 1989, pp. 132-137; Lee, 1989, p. 171; Tokatlián, 1990: 317).

ally an emergency assistance package of US\$ 90 million, and the Drug Enforcement Administration undertook Operation Bolivar, specifically targeting the Medellín organizations.

The fourth crackdown proved more effective than previous efforts because lasted over a year, as opposed to six weeks, and possessed a more coherent strategy that included extradition. The relentless pressure exerted by Colombian and U.S. authorities forced the leaders of the Medellín organizations into hiding, reducing their ability to coordinate large-scale cocaine shipments. Several leading traffickers were captured or killed during police raids. Moreover, the crackdown produced ripple effects throughout the Colombian drug industry. The inability of processing groups associated with the Medellín network to buy the precursor chemicals needed for cocaine processing on a regular basis reduced the price for Peruvian and Bolivian coca leaf to less than half of production costs. The scarcity of cocaine supply affected consumer markets, causing wholesale and retail cocaine prices in the United States to rise between fifty and one hundred percent. However, this price spike proved short-lived, lasting approximately eighteen months (Bagley, 1989-1990, p. 155; Caulkins & Reuter, 1998, p. 603; Farah 1990a, 1990b; Gugliotta 1992, p. 124; Krauss, 1995, p. A12; Nieves, 1997, p. 11; Velásquez, 1993; Whynes, 1992, p. 333).

Nevertheless, by the early 1990s many of the Medellín core organizations had been severely damaged by Colombian and U.S. anti-drug efforts. Prompted by effective police pressure and a decree by a new Colombian president, several leading traffickers, most notably the three Ochoa brothers, turned themselves in to the authorities. In June 1991, when it became clear that the new Colombian constitution would ban extradition of



Colombian nationals, Pablo Escobar also turned himself in to Colombian authorities. However, Escobar's surrender turned out to be largely meaningless as he continued his criminal activities in a luxurious correctional facility of his own construction, from which he escaped after a year of "imprisonment." Over the next two and a half years, Escobar managed to elude Colombian and U.S. authorities and former business associates that turned against him. But the effort to stay alive required all of his resources, eliminating his role as a major trafficker.<sup>11</sup> Meanwhile, competing trafficking enterprises based in Cali took advantage of drug enforcers' single-minded focus on capturing Escobar by expanding their own transnational operations (Cañón, 1994; Nieves, 1997, p. 12).

With the death of Escobar at the hands of an elite Colombian police unit in December 1993, the Colombian government could now turn its attention to the Cali enterprises. However, it would be another fourteen months before Colombian authorities systematically cracked down against the leading Cali traffickers. The impetus for the 1995 offensive was not an act of violence by the *Caleños*, who relied more on bribery than intimidation to protect their interests, but political pressure from Washington. Disgusted with Colombian president Ernesto Samper's ability to stay in power despite a campaign finance scandal in which he was believed to have knowingly accepted contributions from the Rodríguez Orejuela brothers and other traffickers, the U.S. Senate threatened to impose economic sanctions on Colombia if the government failed to achieve certain drug enforcement benchmarks in 1995. These included capturing the leaders of the Cali core organizations, confiscating their illicit assets, and dismantling their criminal operations (Cañón 1994; Economist Intelligence Unit, 1995, p. 4; *Latin*

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<sup>11</sup> For further discussion of these events see Luis Cañón *El Patrón: Vida y muerte de Pablo Escobar* (Bogotá, Colombia: Planeta, 1994).

*American Weekly Report*, 1995a; 1995d; Mattiesen, 2000, pp. 309-310; Nieves, 1997, p. 11; *Semana*, 1995, p. 28; Thoumi 1995, pp. 226-228).

In February 1995, President Samper launched a comprehensive assault on the leaders of the Cali trafficking network. Over the next several months, the Colombian National Police, led by General Rosso José Serrano, captured eighteen tons of coca leaves and two tons of cocaine hydrochloride, destroyed 195 processing laboratories, eradicated 6,000 hectares of coca plantings, and detained 616 suspected traffickers. While impressive, the results did not dramatically exceed the drug enforcement indicators in preceeding years (see Table 2-2 below).

In June the Samper government received a major boost when a special joint military-police unit captured Gilberto Rodríguez Orejuela, the alleged maximum leader of Cali traffickers. Over the next year, the Colombian National Police, with the assistance of the DEA and the CIA, exerted enormous pressure on the remaining Cali leaders, all of whom were eventually either captured or surrendered to government authorities. In combination with the Peruvian government's controversial "shoot-down" policy in the coca paste air bridge between Peru and Colombia, the Cali crackdown produced ripples throughout the cocaine industry. By June 1995, the price of coca paste in Colombia had dropped 50%. By mid-September of the same year, wholesale and retail cocaine prices in New York City, the Cali network's most important U.S. market, increased 50% and 30% respectively. Similar increases were noted in other U.S. cities that received substantial cocaine supplies through the Cali transportation and distribution network (Caulkins & Reuter, 1998, p. 603; *Geopolitical Drug Dispatch*, 1995; Krauss,

1995; *Latin American Weekly Report*, 1995b, 1995c, 1995e, 1995f, 1995g, 1995h, 1995i; Serrano Cadena, 1999).

However, like earlier crackdowns against the Medellín enterprises, these price increases disappeared completely within a year, reflecting the drug industry's ability to absorb even the most intense drug enforcement efforts in the long term. Indeed, following a brief period of regeneration, new and revitalized trafficking groups emerged in Colombia to produce greater amounts of cocaine and heroin than before.

Table 2-2 Colombian Drug Enforcement Indicators, 1980-1995

Year	Persons apprehended	Cocaine interdicted (kilos)	Cocaine base interdicted (kilos)	Heroin Interdicted (kilos)	Marijuana interdicted (kilos)	Drug labs destroyed
1980	358	748	0	0	192,422	29
1981	798	339	0	0	3,302,242	31
1982	1,139	651	0	0	3,283,878	165
1983	1,073	2,083	0	0	3,537,387	113
1984	5,251	19,582	9,448	0	4,301,263	137
1985	1,951	4,239	3,674	0	1,021,046	696
1986	3,699	3,039	4,070	2	846,000	572
1987	4,732	8,326	6,712	2	1,287,272	1,359
1988	4,929	12,047	2,554	0	842,994	655
1989	5,217	24,668	9,601	0	617,925	389
1990	6,253	16,000	3,429	850	659,047	268
1991	6,349	59,347	8,223	0	381,157	235
1992	6,770	28,016	5,289	36	206,934	95
1993	8,136	19,137	6,945	42	505,274	241
1994	7,221	28,145	22,580	94	161,322	334
1995	8,053	34,577	15,375	184	171,347	331

Source: CNP (2000)

#### Phase Five—Mid-1990s to 2000: Decentralization of Colombian Drug Trade

With the fall of the Medellín and Cali cartels the Colombian drug trade has decentralized. Instead of a handful of vertically integrated core organizations that dominate the industry, hundreds of independent trafficking groups operate throughout

Colombia, conducting their activities on a smaller, more discrete scale.<sup>12</sup> Some organizations, particularly several based in the Northern Cauca Valley and Atlantic Coast areas, are long-standing enterprises that escaped the drug enforcement net as the CNP and DEA pursued more prominent core organizations.<sup>13</sup> In addition to these medium-sized survivors, hundreds of small trafficking operations have emerged in recent years. There is variation in size among existing enterprises, with medium-sized organizations ranging from twenty to one hundred participants, and smaller groups containing ten to twenty associates. Contemporary enterprises tend to be “flatter” than the core organizations, and more circumspect in carrying out their activities. Small groups are frequently led by a single figure that exerts substantial decision-making authority, while co-equal subordinates perform the work. Medium-sized organizations often contain different leaders that occupy discrete, functionally-specific managerial positions, similar to the core enterprises (Aero, 2000; DEA, 2000; FBI, 1993; Gallego Castrillón, 2000; Nicosia, 2000; *Semana*, 2000a).

Instead of coordinating several phases of trafficking activities like the core enterprises, many trafficking operations today specialize in single-phases of drug production, processing or transportation. While different groups, including former

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<sup>12</sup> It is not clear how many trafficking enterprises actually exist in Colombia, which is reflected in the wide range of expert estimates. General Serrano, the former head of the Colombian National Police, estimates that there are between 350 and 400 ‘minor’ trafficking organizations operating in Colombia. Alejandro Reyes Posada, a leading Colombian drug researcher, is even more precise. According to Reyes Posada there are 438 narcotics organizations in Colombia, 256 of which are re-structured off-shoots of the former cartels, while 182 represent new groups. A recent report in *Semana* magazine estimates there are between 80 and 100 groups in Colombia that specialize solely in the exportation of cocaine or heroin (Reyes Posada, 1999, p. 2; *Semana*, 2000a, p. 71; Serrano Cadena, 1999, p. 237). My own research suggests that the clandestine nature of drug trafficker merits greater discretion in formulating estimates. While DEA and CNP intelligence officials confirm that there are “hundreds” of trafficking enterprises in Colombia, they also stress the difficulty of providing exact estimates. The highest-ranking DEA official in Colombia told me that while he believes there are several hundred organizations operating in Colombia he does not know the exact number (Arreguin, 2000).

<sup>13</sup> Indeed, a number of these groups provided transportation services to the Medellín and Cali core organizations during the 1980s and 1990s.

competitors, cooperate and pool resources, there appears to be no centralizing coordination mechanism that provides direction and contract enforcement. Another development is that many Colombian enterprises now avoid establishing distribution cells in the U.S., often selling their loads to Mexican trafficking enterprises that complete the international transportation and distribution process.

Trafficking enterprises in Colombia today are frequently led by people with considerable criminal experience. A number of post-cartel start-ups were founded by former mid-level managers of the Medellín and Cali core organizations. Other prominent traffickers have formally "retired" from the day-to-day business of drug trafficking but continue to invest in shipments and offer their advice when solicited. This suggests that the knowledge and experience of the former cartels has not been lost. Traffickers from the core organizations draw on contacts and experience in conducting their present operations, applying previous knowledge to new ventures. Government officials interviewed for this research suggest that one reason why existing operations remain small is that surviving traffickers have learned from experience that they are better off avoiding drug enforcers by purposely limiting the size of their operations.

Contemporary trafficking enterprises rely on basic smuggling routines developed by their predecessors, while exploiting advances in communications and transportation technologies when modifying these practices and procedures. Traffickers continue to use a variety of maritime vessels to transport multi-ton loads and general aviation aircraft for 400-800 kilogram drug shipments. However, at least one enterprise has upgraded to the next level of submarine technology. In September 2000 Colombian officials discovered a partially finished submarine based on advanced Russian technology, including a

computer navigation system and engine room. When completed the submarine would have measured over 100 meters in length and had a transportation capacity of 200 tons, far in excess of the one to three tons of cocaine transported by the “mini-sub” in the Caribbean during the 1990s. Other recent innovations include using calling cards, satellite phones, electronic mail, and encryption technology to communicate information, mixing cocaine hydrochloride with charcoal and iron dust, welding cocaine into cargo ship hulls, and using double-lined latex pellets for internal body carries (Arreguin, 2000; Associated Press, 1998a; Branigan, 1999; Bohning, 2000; Brooks & Farah, 1998; CM&, 2000; CNN, 2000; DEA, 2000; *El Tiempo*, 2000d; Francis, 2000; Johnson, 2000; Markowitz, 2000; Smith, 2000a).

#### Government Drug Enforcement Efforts During Phase Five

Colombian and U.S. drug enforcers continued to target the largest, most well-known trafficking organizations in the late 1990s. In the post-cartel era, this meant the medium-sized enterprises operating in the Northern Cauca Valley and along the Atlantic Coast. Between 1997 and 2000, the leaders of several enterprises surrendered or were captured by government authorities. In August 1997, CNP officials arrested Julio Cesar Nasser David, one of the architects behind the Atlantic Coast trafficking network.<sup>14</sup> The following month, Orlando Henao Montoya, a leader in the North Valley network, surrendered to Colombian officials in Bogotá. In February 1998, CNP forces apprehended José Nelson Urrego, another leader of the North Valley network, at his country estate outside of Medellín. Four months later, Colombian authorities captured

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<sup>14</sup> Nasser David's participation in the Colombian narcotics industry dates back to the 1970s, when his organization smuggled several tons of marijuana to Southern Florida using 'mother ships' and speedboats. In the mid-1980s, Nasser David's organization moved into the cocaine trade, transporting and distributing multi-hundred kilogram shipments of cocaine to the U.S. through containerized cargo and general aviation aircraft (Constantine, 1998; FBI, 1993, p. 31; Chepesiuk, 1999b, p. 153; Reuters, 1998c).

Alberto Orlandez Gamboa, the leader of a large Atlantic Coast trafficking enterprise (Associated Press, 1998; CNNespañol, 1998; Chepesiuk, 1999b, pp. 92, 153, 253; Constantine, 1998; DEA, 2000; FBI, 1993, p. 31; Guzman, 1998; *Los Angeles Times*, 1997; Reuters, 1998a, 1998c).<sup>15</sup>

In October 1999, CNP and DEA officials implemented *Operation Millennium*, targeting a highly sophisticated smuggling network exporting between ten and thirty tons of cocaine per month. In a series of carefully orchestrated raids in Bogotá, Medellín and Cali, CNP agents arrested thirty-three members of the network, including the alleged leader, Bernal Madrigal, and Fabio Ochoa, one of the leaders of the old Medellín cartel (Bajak, 1999; Johnson & Davies, 1999; *El Tiempo*, 1999).<sup>16</sup> Also during this period, CNP drug enforcement units captured a number of traffickers from smaller smuggling groups and disrupted their cocaine and heroin operations (*El Tiempo*, 1997a; *El Tiempo*, 1997b; *El Tiempo*, 1997c; Caracol, 2000a; Caracol, 2000b; DAS, 1997; RCN, 2000; Reuters, 1998b).

These drug enforcement operations indicate that CNP and DEA officials continue to target trafficking organizations in Colombia. However, in spite of these successes, a number of important traffickers remain at large. According to the DEA, Diego Montoya Sanchez, once a mid-level figure in the North Cauca Valley network now leads one of the major organizations in the area. Montoya Sanchez was the principal cocaine supplier for the Madrigal operation and continues to coordinate multi-ton shipments of cocaine to

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<sup>15</sup> During the early 1990s, Orlandez Gamboa's organization was associated with the Cali-based trafficking network. Following the capture of the leaders of Cali core organizations in 1995 and 1996, Orlandez Gamboa branched out on his own, exploiting maritime and air routes through Mexico and the Caribbean to smuggle multi-ton shipments of cocaine and marijuana to the U.S.

<sup>16</sup> Since their arrest Ochoa and Madrigal have been extradited to the U.S., where they are now awaiting trial for numerous trafficking-related criminal charges (*El Tiempo*, 2001d, 2001e; Forero, 2001b; U.S. Attorneys Office, 2001a, 2001b).

Mexico and the U.S. The DEA and CNP have identified other traffickers they believe now lead the Atlantic Coast and North Cauca Valley networks. Moreover, drug enforcers fear that surviving remnants of the Medellín and Cali cartels are reorganizing, led by former mid-level managers. In addition to these medium-sized enterprises there are now hundreds of smaller independent trafficking groups operating in Colombia. Some of these groups are led by notorious traffickers that continue to elude drug enforcers, others are run by individuals unknown to Colombian and U.S. authorities. With so many criminal enterprises determined to produce and transport illicit drugs, Colombia remains poised to continue its leading position in the international drug trade.

Table 2-3 Colombian Drug Enforcement Indicators, 1996-1999

Year	Persons apprehended	Cocaine interdicted (kilos)	Cocaine base interdicted (kilos)	Heroin Interdicted (kilos)	Marijuana interdicted (kilos)	Drug labs destroyed
1996	5,703	17,808	11,142	88	101,519	436
1997	10,711	35,792	14,906	176	117,880	228
1998	18,276	46,256	11,346	341	73,085	198
1999	21,168	21,423	9,621	541	71,369	100

Source: CNP (2000)

### Conclusion

Over the past seventy years, the Colombian drug trade, and the illicit enterprises that coordinate it, have undergone a variety of changes. While the empirical record of this clandestine industry remains sketchy, particularly in the early decades, this chapter draws on the available materials to craft a credible, coherent narrative. In the beginning, drug trafficking in Colombia was sporadic. Smugglers, often working alone, transported minute quantities of European produced cocaine and heroin through Colombia and Panama on the way to North American markets. Sometime in the 1940s or 1950s, a number of pioneers, perhaps of German extraction, developed cocaine and heroin



processing laboratories on Colombian soil, transforming the country from mere transshipment point to drug producer. Early producers sold their illegal wares to international smugglers based in Cuba who transported the drugs to the U.S. During the 1950s and 1960s, many smugglers based in Colombia were content to serve as suppliers and shippers for trafficking enterprises based in other countries, including Cuba, Chile, Mexico, and the United States. The primary psychoactive drugs produced in or passing through Colombia at this time were marijuana and cocaine.

In the late 1960s and early 1970s a fundamental change occurred in the Colombian drug trade. Several enterprises expanded into U.S. wholesale distribution markets. These networks developed infrastructures and technologies that laid the foundation for core enterprises in the 1980s. With the rise of the Medellín and Cali "cartels," and their multi-tonnage trafficking capacities, Colombia's dominant position in the international cocaine trade solidified. Driven by growing U.S. appetites for marijuana and cocaine, the amount of psychactive drugs coming out of Colombian in the 1970s and 1980s increased substantially, while the organizations coordinating this traffic also grew and became increasingly bureaucratic.

By the mid-1980s, a number of Colombian trafficking enterprises had become too large, their leaders too ambitious. Over the next decade, the Colombian and U.S. governments waged an on-again, off-again campaign to dismantle the leading core organizations. While drug enforcers achieved remarkable victories, dismantling several Medellín and Cali cartels, their ability to disrupt the industry was limited by the fluid nature of trafficking enterprises. Within months of even the most effective supply-reduction programs, drug smugglers would bounce back, revitalizing existing operations

or creating new ones, driven by the strong demand for their illicit commodities in U.S. and European drug markets.

Table 2-4 Evolution of Illicit Drug Industry in Colombia

Phase	Time Period	Characteristics of Colombian Drug Trade	Organizational Exemplar
One	1930s	Individual smugglers transport cocaine and heroin to Panama	N/A
Two	Late 1930s-early 1960s	Smugglers transport cocaine and heroin in Caribbean, supply criminal organizations based in Havana, development of cocaine and heroin processing labs in Antioquia	Herran Olazaga brothers
Three	Late 1960s-1970s	Marijuana and cocaine trafficking groups supply Cuban, American, Chilean & Mexican networks; establishment of Colombian distribution networks in U.S.	Herrera network, Bravo network,
Four	Late 1970s-early 1990s	Rise of core organizations and support networks; spread of cocaine production throughout Colombia; participation of guerrillas and paramilitary groups; dismantling of Medellín and Cali core organizations	Core organizations in Medellín and Cali
Five	Mid 1990s-present	Decentralization of Colombian drug trade; small and medium-sized groups; growth of cocaine & heroin production in Colombia	North Valley network, Atlantic Coast network, Madrigal network

Today, many trafficking enterprises in Colombia bear a greater resemblance to the pre-cartel groups of the 1960s and 1970s than to the core organizations that followed. They are small and contain flat decision-making hierarchies. They specialize in drug production or transportation, but not both. Their leaders avoid the limelight, managing their operations with the utmost discretion. Yet, in one significant respect existing groups remain similar to their larger predecessors. They continue to modify their trafficking practices by exploiting advances in communications and transportation

technologies, ensuring that their smaller size does not equate with lesser sophistication. The remainder of this study is devoted to understanding how these criminal enterprises, and their state adversaries, draw on information and experience to alter their form and function over time.

### CHAPTER 3

#### TOWARD A THEORETICAL UNDERSTANDING OF ORGANIZATIONS AND ORGANIZATIONAL LEARNING

Organizational learning is a slippery concept. It contains multiple meanings that are open to a variety of interpretations. Learning is difficult to define, let alone measure and apply to empirical settings. Reflecting such difficulties, the academic literature lacks a generally agreed upon theory of organizational learning (Levy, 1994, p. 280; Fiol & Lyles, 1985, p. 803; Keohane & Nye, 1989, p. 264; Stein, 1994, p. 224). In spite of the theoretical and methodological challenges associated with organizational learning, over the past several decades social scientists have drawn on a number of basic concepts to develop a cumulative body of research that demonstrating learning to be a valid explanation for certain types of organizational change. Dating back to Herbert Simon's seminal formulation, first published in 1945, that organizations "intelligently" adjust routines in response to external stimuli and experience, political scientists have applied notions of learning to a variety of subject matter, including government institutions, intergovernmental bodies, military organizations, transnational epistemic communities, and elite decision-makers.<sup>1</sup>

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<sup>1</sup> Two decades after the appearance of the first edition *Administrative Behavior* (Simon, [1945] 1997), Karl Deutsch applied the concept of cybernetics to communications systems within governments and other social organizations (Deutsch, 1966). In the early 1970s several political scientists and diplomatic historians analyzed how policy makers draw on "lessons of the past" when making decisions (Lowenthal, 1972; May, 1973). In 1976, Robert Jervis drew on social and cognitive psychology to explain how decision makers reason and learn from previous experience (Jervis, 1976). In recent years the research agenda on learning in political science has gathered momentum as a growing number of scholars have applied learning concepts to individual decision-making and organizational behavior. Examples of this literature include—but are not limited to: Breslauer and Tetlock (1991), Dodd (1994), Eden (forthcoming), Etheredge (1985), Evangelista (1988), Goldgeier (1994), Goldstein & Keohane (1993), Haas (1990), Haas

In this literature, criminal organizations and law enforcement agencies have rarely been topics of empirical interest. This research builds on existing studies by examining organizations that stand at the intersection of the rule of law and national security. The lack of attention provided trafficking enterprises and drug enforcement agencies in the organizational learning literature raises a number of questions. Most basically, what is a drug trafficking organization that it may learn, and undertake other collective actions? Do police agencies and trafficking enterprises learn from experience and information? If these state and non-state collectives alter their practices and procedures, how can we be sure that such changes are attributable to learning rather than alternative considerations? What are the individual and organizational obstacles to learning? Assuming that trafficking enterprises and law enforcement agencies do on occasion learn, what conditions facilitate this process?

I do not propose to answer these demanding questions in this chapter. That challenge unfolds later in this study. Here, my aim is more modest: to develop the theoretical framework that guides subsequent analysis. I begin by discussing a concept that subsumes organizational learning: organization. In order to evaluate whether trafficking enterprises and drug enforcement agencies learn as organizations, I am compelled to explain the latter concept. I do so by drawing on the open-systems perspective of organization theory. Following this discussion, I proceed with a definition of organizational learning that disaggregates the process into separate but overlapping

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(1992), Haas & Haas (1995), Hall (1993), Heclo (1974), Khong (1992), Leng (1992), Le Prestre (1995), Mann (1992), McCoy (2000), Mendelson (1993), Moltz (1993), Nagl (1999), Ndumbaro (1998), Nolan (1994), Nye (1987), Posen (1984), Reiter (1996), Sabatier (1988), Sagan (1993), Sikkink (1997), Snyder (1991), Stein (1994), Weir and Skocpol (1985), Welch Larson (1985), Zarkin (2000), and Zeng (1999). For recent overviews of the political science literature on learning see Bennett & Howlett (1992) and Levy (1994).

phases of information acquisition, interpretation, and application. In recognition that learning is not the only source of change in organizational routines, I address alternative sources of change in organizational behavior, including power and environmental selection. I follow this with brief analyses of several different learning concepts that are pertinent to this research, including competitive learning ecologies, “productive” learning, tactical adaptation, and strategic learning. The chapter continues with a detailed discussion of the numerous psychological, organizational, and environmental obstacles to organizational learning, including bounded rationality, “tall” hierarchies, and benevolent environments.

As fascinating as the concept of organizational learning may be, my purpose in these pages is not to theorize for its own sake, but to develop a series of propositions that can be applied to the units of analysis in this research. Throughout this chapter I intersperse the discussion with falsifiable propositions that I apply to trafficking enterprises and drug enforcement agencies in subsequent chapters.

### Organizations

At the most basic level, organizations are simply collections of participants that coordinate their activities through patterned behaviors, and draw on resources and technologies to achieve specific goals. Organizations are social systems that contain five inter-related components: tasks, environments, structures, participants, and technologies (Scott, 1998).

### Organizational Tasks

Organizations exist to achieve aims shared amongst participants. Tasks are embodied in goals that drive organization behavior, and objectives to achieve these

desired ends. Organizational goals include creating goods and services, attaining satisfactory profits and other economic, social and political benefits, and ensuring the survival of the enterprise. Objectives include constructing production facilities, searching for new markets, devising innovative production and marketing methods, recruiting people to work for the organization, and reducing internal and external threats to the integrity of the enterprise. The determination of "satisfactory" benefits is highly subjective and varies among organizations. However, autonomous organizations do not exist for long unless the value of their products exceeds the resources needed to make them (Leavitt *et al.*, 1973, pp. 10-11; Scott, 1998, pp. 20-21).

Tasks may be clearly defined and widely appreciated within an organization, or they may be vaguely understood and unique to sub-parts of the collective (Leavitt *et al.*, 1973, pp. 23, 27). As Barnard and Simon recognized decades ago, individuals within organizations frequently do not share a common conception of organizational goals (Barnard, 1938; Simon, [1945] 1997). Moreover, organizations typically pursue multiple objectives simultaneously, which can create competition and conflict among different parts of the enterprise.

### Environments

Organizations develop within environmental contexts. Environments provide opportunities for participants to coordinate their behavior, and the material and symbolic resources necessary to survive. In organization analysis, the environment is a residual concept. It refers to anything outside the organization. Dill's notion of the task environment provides an element of precision to this broad concept. The task environment refers to those parts of the environment that are relevant to the

organization's aim or purpose. Dill (1958), and subsequently Thompson (1967), disaggregate the task environment into four areas: (1) customers or clients of the organization (including distributors and consumers); (2) suppliers of labor, capital and technologies; (3) competitors for market share and resources; and (4) regulatory groups, which include government agencies. The organizations that fulfill these roles comprise an organization set. An organization set is composed of the customers, suppliers, competitors and regulators with which an enterprise interacts in order to achieve its purpose (Blau & Scott, 1962; Dill, 1958; Evan, 1966; Kaufman, 1985, p. 41; Posen, 1984, p. 43; Scott, 1998, p. 147; Scott, 1998, pp. 124, 147; Smith, 1980, p. 376; Thompson, 1967, pp. 27-28).

Organizations draw on task environments for a wide variety of physical, technological, and symbolic inputs. Organizations obtain necessary inflows of capital, participants, and technology from external suppliers. Capital provides the enterprise with the financial resources necessary to acquire other material and informational resources. Participants bring knowledge, skills and experience that organizations use to perform tasks. Technologies include the equipment, machines, instruments, and information necessary for the organization to accomplish work. Of course, interactions between enterprises and task environments are not unidirectional: organizations trade outputs with customers or clients in return for more inputs. In order to receive the necessary inputs, organizations must produce goods or services valued by their customers or clients. This is true for both legal and illegal organizations (Posen, 1984, p. 43; Scott, 1998, pp. 21-22, 229; Smith, 1975, pp. 340-341; Thompson, 1967, p. 28).



### Hostile environments

Environments are not only a source of opportunities and resources for organizations; they are also a source of uncertainty and risk. The ongoing flows of personnel, resources and information between organizations and their task environments are frequently erratic and unpredictable. While a number of factors affect the degree of risk and uncertainty within an environment, few are as salient as the degree of environmental hostility, as opposed to benevolence. A hostile task environment contains two or more interconnected adversaries, at least one of which seeks to dismantle other actors within the system. While a benevolent environment is not necessarily devoid of competition, it is “friendly” in the sense that the ultimate goal is to out-perform but not undermine the other units, so that all may survive to play another day.

### Organizational Structure

Structure refers to relationship patterns among participants in organizational settings. These patterns emerge from values, norms, roles and routines that characterize how organizations function. Values refer to criteria for selecting desired goals of organizations, such as increasing profits and ensuring organizational survival. Norms are general rules that specify appropriate means for pursuing goals, such as exploiting new markets and investing in research and development. Roles are behavioral expectations for organization participants, often dealing with task performance. Roles define the division of labor within organizations, assigning participants to tasks that facilitate collective aims. Structure is not arranged randomly but ordered into coherent “beliefs and prescriptions governing the behavior of participants” (Scott, 1998, pp. 17-18). These patterns provide enduring, but not necessarily static, frameworks for structuring

authority, work, and communication within organizations (Argyris & Schön, 1996, pp. 8-9; Donald & Wilson, 2000, p. 194; Leavitt, 1965, p. 1144; Leavitt *et al.*, 1973, p. 4; McCluskey & Wardle, 2000, p. 252).

### Routines

Routines are an essential part of organization structure. They include rules, procedures, conventions, and practices that guide individual behavior within organizations. Routines “interlock” behavior among multiple participants by matching action to informational cues. Routines provide “rules of thumb” for participants to respond to incoming stimuli in ways that make sense. In this manner, routines coordinate the behavior of different individuals into coherent and predictable patterns of behavior. This coordination allows organizations to accomplish work reliably and consistently (Cohen & Bacdayan, 1996, p. 348; Cyert & March, 1963; Feldman, 2000, p. 611; March & Simon, 1958; Weick, 1979, pp. 112-115).

In addition to organizing individual action into collective behavior, routines influence participants by providing rules for conduct, along with an incentive system that matches rewards and punishments for specific action. Through training and socialization, participants learn the rules and procedures of their organization and receive rewards (or punishments) according to their ability to follow them. Successful participants generally move up the ranks of the organization and tend to apply the same criteria to their subordinates. In this manner, routines frequently become institutionalized within organizations, outlasting individual participants and sometimes even their original usefulness (Levitt & March, 1988, p. 320; March & Simon, 1958, p. 145; Posen, 1984, p. 44).

Organizations use routines to structure authority relations, allocate resources, make plans, perform tasks, assign roles, communicate information, build culture, and solve problems. Routines describe how organizations structure authority among different layers of decision-making hierarchy. They describe the functional responsibilities of different roles within the collective. Routines explain how organizations create the goods or services that they produce. They show how organizations maintain records of at least certain aspects of their operations. Routines determine how information is shared within the collective and who has access to what data. They express important values and provide a means of constructing organizational culture. Finally, routines describe how organizations respond to existing problems and plan future endeavors (Cyert & March, 1963, pp. 103-104; Decker *et al.*, 1998, p. 407; Levitt & March, 1988, p. 320).

Routines are nested in several levels of organizational behavior. Standard operating procedures are simple rules of thumb for accomplishing basic tasks, as when a participant responds to a stimulus by performing a specific action. Basic procedures are combined to create more complicated action-sequences called performance programs and repertoires. A performance program is simply a cluster of procedures for dealing with a specific situation. A repertoire is the sum of the organization's performance programs for organizing behavior in an area of activity (March & Simon, 1958, p. 141; Posen, 1984, p. 44).<sup>2</sup>

Like their building blocks, performance programs are triggered by stimuli. The sounding of an alarm bell in a fire station provokes a fairly elaborate program of activity carried out by numerous participants. Two or more procedures can be combined to form

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<sup>2</sup> This is similar to Swidler's notion of cultural tool kits. According to Swidler, culture influences action by providing a repertoire or "tool kit" of habits, skills, and styles from which people construct "strategies of action." See Swidler (1986) and Kier (1997).

a performance program. Posen provides a simple but illustrative example in his organizational analysis of military doctrine. In most Western armies, it is standard operating procedure for tanks to fire from the "hull-down" position as this provides greater protection from enemy fire. Another standard procedure calls for tanks to advance by exploiting topographical irregularities in the surrounding terrain. Military organizations often combine these two procedures into an effective performance program: while some tanks advance on the enemy by exploiting the terrain, others remain in defensive firing position and provide cover for the advancing units. An organizational repertoire refers to the combination of performance programs available to an organization when undertaking an activity. The performance program described by Posen is one of many available in a military organization's repertoire for engaging in land-based warfare (March & Simon, 1958, p. 141; Posen, 1984, p. 44).

Organizations vary in the degree to which their routines are formalized. Rules and procedures may be considered more or less formal to the extent that they are codified in documents. "Formal" routines are explicitly documented in manuals, files, data bases, financial accounts, and other forms of organizational memory. "Informal" routines are not recorded in documents but exist in the inter-subjective mind of organization participants. These customs, norms, rules and procedures are shared verbally and reinforced amongst participants through socialization processes. Certain understandings of "how things are done around here" are reinforced over others as participants engage in their daily activities. While some organizations may contain mostly formal or informal routines, many contain both types, with some rules and procedures formally recorded in

organizational memories and other routines found in inter-subjective understandings among participants.

### Participants in Organizations

Organizations pursue their tasks through participants that make contributions in return for inducements. Participants supply the human resources that allow organizations to accomplish work. They define goals and objectives, form routines, perform tasks, make decisions, share information, plan future actions, and address problems.

Participants join organizations for different reasons. Moreover, their assessments of satisfactory inducements are subjective. Even wages are not a sufficient inducement for all potential recruits. Human beings seek authority, status, power, fellowship, and a host of other entitlements besides money. Complicating matters, participants frequently belong to more than one organization, and their loyalty to the different collectives varies considerably. Participants flow from one organization to another, carrying with them values, norms, and beliefs about themselves and the roles they play (Barnard, 1938; Cohen *et al.*, 1988, p. 295; Feldman, 2000, p. 614; Leavitt, 1965, p. 1144; Posen, 1984, p. 43; Scott, 1998, p. 19).

In addition to their myriad contributions, participants are also a source of great uncertainty for organizations. To accomplish their tasks, organizations require coordination and control, and this is not easily achieved among participants with fluid participation, wavering loyalties, and different conceptions of satisfactory inducements. Moreover, even the most loyal and satisfied participants are limited in their ability to pursue organizational aims. Like all human beings, they are bound by cognitive, corporeal, and cathectic constraints. Of course, organizations are designed with these

limitations in mind, and much of their social structure can be understood as mechanisms by which organizational leaders and managers seek to channel participants' competing aspirations, energies and activities into a coherent and consistent pattern of behavior that facilitates the organization's purpose. However, people are not mindless automatons, and their aspirations, hopes, and fears cannot be calculated and manipulated like threshing gears and rotating gyroscopes (Feldman, 2000, p. 614; Posen, 1984, p. 43; Simon, 1997).

### Technology

Organizations perform work. Some organizations manufacture materials or machines; others provide services, information or other products. Technology refers to the material and symbolic inputs that organizations use to complete work. Technology includes the equipment, instruments, and information that participants use to complete their activities, as well as the technical knowledge and skills of participants themselves (Scott, 1998, p. 21; Leavitt, 1965, p. 1144; Leavitt *et al.*, 1973, p. 4).

Whether the purpose of an organization is to produce legal or illegal products, it draws on necessary technological resources. If the purpose of an organization is to provide education, it will make use of material and symbolic resources that allow it to accomplish this aim. Such resources include buildings for housing classrooms and administrative offices, computers, projectors and books for developing and delivering course materials, and the accumulated knowledge and skills of educators and their support staff. Likewise, an organization that provides escort services will require an office and/or other physical location(s) to coordinate and implement operations; telephones, beepers and other equipment for communicating among participants, customers, suppliers, and regulators; computers or other instruments for keeping track of

organizational inputs and outputs; support materials and services that allow participants to carry out their activities; and the knowledge, skills and experience of sex workers themselves.

Depending on the degree of hostility in the task environment, criminal organizations may be required to devote a considerable portion of their technological resources to conceal and otherwise protect the physical integrity of their operations. However, some illicit activities, including illegal gambling and prostitution, are more accepted among law enforcement and government officials than others, such as narcotics and weapons trafficking (Reuter, 1983; Smith, 1975). For this reason, it is not surprising that many contemporary narcotics organizations devote a substantial portion of their technological resources towards reducing uncertainty and risk emanating from the task environment. Trafficking enterprises use these material and symbolic inputs to hide narcotics shipments, corrupt government officials, encipher communications, gather counter-intelligence, stockpile inputs, and maintain warehouse inventories.

### Defining Organizational Learning

Organizations learn when participants receive, interpret, and apply information to behavior through organizational routines. Organizational learning is a form of organizational action. When an organization "acts," such that participants fulfill roles and perform functions on behalf of the collective, then it may be said to "learn" when participants gather, analyze, and apply information (Argyris, 1993, p. 8; Argyris & Schön, 1996, p. 10; Farkas, 1998; Hedberg, 1981, p. 3; Simon, 1996, p. 176). Throughout this study, organizational learning refers to a certain type of behavior performed by individuals acting on behalf of the collective.

The process of organizational learning can be conceptually disaggregated into three steps: acquiring, interpreting, and acting on information (see Figure 3-1 below).<sup>3</sup> Organizational learning unfolds as information is discovered, shared, and applied by participants that coordinate their activities through formal and informal routines. The three phases of organizational learning are disaggregated for heuristic purposes; in reality, information can be acquired, interpreted, and applied simultaneously. The different steps are connected through feedback loops that reinforce certain interpretations and behaviors while disregarding others. There are a number of impediments to organizational learning, and the process may be blocked at any phase. I discuss obstacles to learning in detail later in the chapter.

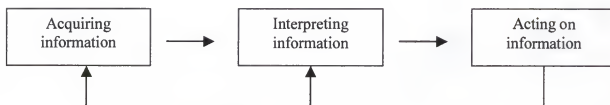


Figure 3-1 Simple Process Model of Organizational Learning

*Source:* Adapted from Daft & Weick (1984), Garvin (2000).

### Acquiring Information

The first step in the organizational learning process is gathering information. Information is the lifeline of organizational learning. Information includes know-how, understanding, techniques or practices and is useful to the extent that it helps organizations achieve targets. Organizations acquire information through their own trial

<sup>3</sup> Although the language varies, a number of analysts conceptualize organizational learning as a process composed of three or four discrete stages. Daft and Weick describe learning according to three analogous stages, including scanning (data collection), interpretation (data given meaning), and learning (action taken) (Daft & Weick, 1984, p. 286). Kim describes learning as composed of four stages: observing, assessing, designing, and implementing (Kim, 1993, p. 44). See Garvin for discussion on this point (Garvin, 2000, endnote 4, p. 223).



and error experience and exogenous search. Trial and error experience refers to the process by which organizations interact with their environment, using a variety of tactics and strategies designed to achieve targets. The experience that emerges from this activity provides a valuable guide for future behavior. Search refers to the process by which organizations gather information from sources exogenous to the organization but endogenous to the task environment. Search provides the means to draw on the knowledge and experience of others, including customers, consultants and competitors, in making decisions (Argyris & Schön, 1996, p. 3; Weick, 1979).

Gathering information is costly. It involves an expenditure of organizational resources, including time, attention, personnel, and money. Because resources are limited, organizations are more likely to acquire knowledge and experience when they have a reason to do so, such as the need to find a solution to a problem. As target-oriented entities, the failure to meet targets or objectives is a common source of problems in organizations. The failure to match expected outcomes with actual outcomes produces emotional arousal on the part of participants that triggers a search for information, including alternative courses of action to resolve the problem (Allison, 1971, p. 84; Argyris & Schön, 1996, p. xxiii; Garvin, 2000, p. 23; March, 1988, p. 3; March & Olsen, 1989, p. 60; Weick, 1995, pp. 45-46).

### Interpreting Information

For the learning process to proceed, participants must interpret information. Daft and Weick provide an illuminating description of this complex process:

Organizations must make interpretations. Managers literally must wade into the ocean of events that surround the organization and actively try to make sense of them. Organizational participants physically act on these events, attending to some of them, ignoring most of them, and talking to other people to see what they

are doing.... Interpretation is the process of translating these events, of developing models for understanding, of bringing out meaning, and of assembling conceptual schemes among managers (Daft & Weick, 1984, p. 286).

Interpretation is a social process through which organizational participants share their perceptions and construct inter-subjective understandings that allow them to make sense of relevant events. When engaged in interpretation, or "sensemaking," participants communicate, share knowledge and experience, and construct linkages between the present situation and prior experiences, often with the assistance of analogical reasoning (Daft & Weick, 1984, p. 286; Khong, 1992; Neustadt & May, 1986; Weick, 1995, pp. 45-46).

Organization managers and other participants are individual cognitive agents; they draw on "schemas" when analyzing information.<sup>4</sup> Schemas are knowledge structures that individuals use to "lend order to an otherwise incomprehensible confusion of information and experience" (Reiter, 1996, p. 21). Schemas help individuals make sense of what has gone before them and what transpires around them by providing cognitive shortcuts or frames of reference. As personalized frames, they can be an impediment to organizational learning, preventing decision-makers from interpreting a problem or solution in the same light.

Within organizations, participants share, record, and interpret knowledge and experience through formal and informal organizational memories. Formal organizational memories include files, manuals, correspondence, databases, financial accounts, and physical objects that record and store knowledge, such as monthly accounting statements, minutes from meetings, electronic mail, and computers (Arygris & Schön, 1996, p. 16;

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<sup>4</sup> "Schemas" are knowledge structures that individuals use to "lend order to an otherwise incomprehensible confusion of information and experience" (Reiter, 1996, p. 21). Schemas help individuals make sense of experience and their environment by providing cognitive shortcuts or frames of reference.

Simon 1997, p. 218). Although recent advances in information technology have reduced the costs of recording and retrieving information, much organizational experience remains undocumented. Undocumented knowledge is often transmitted through informal organizational memories. These include the conversations, stories, and myths through which participants construct and conserve inter-subjective understandings regarding appropriate practices and procedures (Levitt & March, 1988, p. 327; Argyris & Schön, 1996, p. 16).

Organizations interpret only a small portion of their experience at a time. Organizational memories are evoked at certain times by particular parts of the collective. Depending on how they are organized, some aspects of organizational memories may be more accessible than others. In particular, the availability of memories is associated with their recency and frequency of use, as well as their location within the organization. Recently and frequently used memories are easier to retrieve than those that are used only sparingly or have not been accessed over a considerable period of time. Information stored in electronic documents that form part of computerized data bases, or paper documents located in well-organized filing systems are more likely to be used than isolated documents stored in obscure locations (Levitt & March, 1988, pp. 328-329).

#### Applying Information

The process of organizational learning is not complete until knowledge that has been acquired and interpreted by participants is applied to collective behavior (Garvin, 2000, p. 26). Organizations enact knowledge and experience through routines. Routines include rules, procedures, conventions, and practices that guide individual behavior within organizational settings. Routines provide the mechanism through which the

behavior of multiple participants is “interlocked” (Feldman, 1989, p. 136; Hutchins, 1996, p. 50; Weick, 1979, p. 3). Routines are transmitted over time through socialization, training and personnel movement. They are recorded in formal and informal organizational memories. Moreover, they are “independent of the individual actors who execute them and are capable of surviving considerable turnover in individual actors” (Levitt & March, 1988, p. 320). Members may come and go and the organization’s leadership may change, but when an organization learns, knowledge is preserved in formal and informal memories and routines that outlast individual participants. Routines that are associated with desirable consequences, such as improved task performance, tend to be selected and retained by organizations.<sup>5</sup> If participants can be shown to alter a routine or series of routines as a result of acquiring and interpreting experience, then the organization may be said to have learned from that experience (Daft & Weick, 1984, p. 285; Fiol & Lyles, 1985, p. 804; Hedberg, 1981, p. 6; Levitt & March, 1988, p. 326; Nye, 1987, p. 381; Zeng, 1999, p. 39).

Organizations differ with respect to the extent that their behavior is determined by formal or informal routines. Large government bureaucracies with extensive institutional histories tend to document experience through codified rules and procedures. Small craft-based enterprises rely more on informal understandings transmitted verbally among participants. Organizations that face complex uncertainties or hostile task environments rely more on informally shared understandings than organizations that function with relatively simple, stable environments (Levitt & March, 1988, p. 327; Ouchi, 1980).

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<sup>5</sup> However, this is not always the case, as we shall see below when discussing learning under ambiguity.

### Research Propositions

Organizational learning refers to the process by which participants gather, interpret, and apply information on behalf of an organization. The application of knowledge and experience occurs through changes in informal and formal routines that guide participants' behavior. This study applies a process-oriented model of organizational learning to two units of analysis: Colombian drug trafficking enterprises and U.S. and Colombian drug enforcement agencies.

If participants within either organization alter their routines *as a result of* acquiring and interpreting knowledge and experience, then the enterprise in question may be said to have learned. In trafficking enterprises, changes in organizational practices and procedures may involve the production, transportation, and distribution of illicit drugs, or money laundering activities. For law enforcement agencies, changes in organizational practices and procedures may involve criminal investigations or drug enforcement operations. For both organizations, changes in routines may improve organizational task performance, but they are not required to do so.

These ideas yield the following empirically verifiable propositions.

**P1:** If participants in Colombian drug trafficking enterprises gather, interpret, and apply information to collective behavior by changing existing routines or creating new ones, then organizational learning has occurred.

**P2:** If participants in U.S. and Colombian drug enforcement agencies gather, interpret, and apply information to collective behavior by changing existing routines or creating new ones, then organizational learning has occurred.

### Alternative Explanations for Organizational Change

Learning is not the only source of change in organizations, and it is important to clarify alternative explanations for this phenomenon. Perhaps the most common source

of non-learning change is the imposition of new or modified routines by more powerful external actors on the unit of analysis. In the late 1960s and early 1970s, U.S. federal drug enforcement agencies underwent a variety of organizational changes. However, these changes were due to the imposition of new organizational structures and procedures by policymakers in the Johnson and Nixon administrations, rather than information processing by decision-makers within the drug enforcement agencies.<sup>6</sup>

It is possible to argue that learning takes place in such circumstances, but it is the more powerful actor that learns and passes lessons on to the subordinate agency in the form of routines that encode experience. While this may be true in some cases, the explanation is largely unsatisfactory because it allows the analyst to change the unit of analysis *ex post facto*. To reliably evaluate the research propositions, it is important to maintain a consistent unit of analysis during the design and implementation of the research. In this study, the units of analysis are Colombian drug trafficking enterprises and U.S. and Colombian drug enforcement agencies. If change in routines is not due to the information processing activities of these organizations, then learning, according to the parameters of this research design, has not occurred.

P3: Organizational learning does not occur when changes in organizational routines are due to the imposed preferences of more powerful political or bureaucratic actors.

Another source of non-learning change is environmental selection. This occurs when changes in organizational structures or operations appear as one set of actors is selected out of the system and replaced by another. Because they operate in hostile task environments it is not uncommon for trafficking enterprises to be selected out of the illicit drug industry (*i.e.* identified and dismantled) by drug enforcement agencies. In this

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<sup>6</sup> For analysis of these reforms, see Rachal (1983) and Wilson (1978, 1989).

manner, successful drug enforcement yields a process of “natural selection” that favors some criminal enterprises over others. Trafficking organizations that survive drug enforcement efforts may contain more effective combinations of decision-making hierarchies, leadership styles, and operating procedures (Alchian, 1950; Kaufman, 1985; Moe, 1984, p. 746; Nelson & Winter, 1981).

Over time, organizational forms better suited to survive hostile task environments may populate the illicit drug industry (see Chapter 2). However, if survivors do not change their routines as a result of information processing, then learning has not taken place. Surviving enterprises may be more effective than their predecessors, at least in terms of their ability to elude the state, but their ability is not due to organizational learning. On the other hand, if participants in trafficking enterprises recognize that they must change their organizational routines to survive hostile environments, and they do so as a result of this recognition, then learning has transpired.

P4: Changes in the illicit drug industry may be due to natural selection rather than organizational learning by individual enterprises.



Figure 3-2 Alternative Sources of Change in Organizational Routines

Organizational learning is a cognitive activity performed by participants that observe and interpret events and make decisions based on their perceptions of reality. While organizations are open systems, sensitive to exogenous pressures, the source of learning is ultimately endogenous to the enterprise. This does not require participants with access to complete information or unlimited computational abilities (see discussion below). It does require participants that recognize they belong to a goal-oriented collective, and act and manipulate information on behalf of this entity. To qualify as organizational learning, change in routines must be the *result* of information acquisition and processing activities on the part of participants. Otherwise, it is not certain that organizational change is due to learning or alternative explanatory variables, such as power or environmental selection.<sup>7</sup>

### Learning Ecologies

Organizations interact with other organizations that share common task environments. Organizations draw on task environments for resources, including personnel, equipment, capital, and information. In common task environments, one organization's knowledge and experience can be captured by others through the diffusion of technology. Technology, understood broadly to include material equipment, routines, and organizational memories, spreads through environments as organizations copy or mimic one another. Often, targets of technology transfer are those organizations that are seen as successful by their peers. These model organizations use superior

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<sup>7</sup> By distinguishing learning from other sources of organizational change, this study avoids a common tautology in the literature. However, by making the distinction between learning and change so explicit, I have increased the difficulty of demonstrating learning in subsequent chapters. My challenge is to show that changes in routines by drug trafficking enterprises and drug enforcement agencies are due to information acquisition, processing, and application, rather than other factors, such as power and environmental selection.



technologies believed to be worthy of emulation. Agents of diffusion include participants that communicate with inter-connected organizations, including competitors, and independent consultants that contain the requisite knowledge and experience (DiMaggio & Powell, 1983, pp. 150-153; Levitt & March, 1988, p. 329; March, 1999, p. 45; Scott, 1998, p. 213).

“Ecologies of learning” develop when multiple organizations learn from each other within a shared environment. The classic type is a “collection of competitors,” in which rivals are closely linked through the diffusion of experience and the effects of their activities on one another. In this type of learning ecology, organizations compete not only for resources, customers, and profits but for political power and social legitimacy. Organizations learn from their competitors by analyzing their competitor’s reactions to their own actions (DiMaggio & Powell 1983, p. 150; Hedberg 1981, p. 13; Levitt and March 1988, pp. 329, 331-332).

P5: Colombian drug trafficking enterprises and U.S. and Colombian drug enforcement agencies learn from each other within common competitive learning ecologies.

Competitive learning ecologies complicate the task of analysis. Because organizations in these environments draw on their competitors for knowledge and experience, learning by the one cannot be fully understood without reference to learning by the other. In recognition of this complication, this study analyzes interactions between trafficking enterprises and drug enforcement agencies to determine whether they learn from each other (see Chapter 6).

### "Productive" Learning

Among organization theorists, learning is commonly equated with improved task performance.<sup>8</sup> A number of analysts have drawn on this assumption to define learning as the organization's ability to improve task performance over time. According to Fiol and Lyles, learning is "the process of improving actions through better knowledge and understanding" (Fiol & Lyles, 1985, p. 803). Dodgson describes learning as "the ways firms build, supplement and organize knowledge and routines around their activities... and develop organizational efficiency by improving the use of the broad skills of their workforces" (Dodgson, 1993, p. 377). In their early collaborative research, Argyris and Schön equate learning with increasing organizational effectiveness, however, in their more recent work they distinguish "productive" learning, which improves performance, from "generic" learning that does not. The former variety remains the focus of their theoretical and empirical work. Other analysts have chosen different labels for learning that improves performance, including "instrumental," "effective," and "efficiency" learning (Argyris & Schön, 1978; Argyris & Schön, 1996, p. 4; Hedberg, 1981, p. 3; Ndumbaro, 1998, p. 39 Tetlock, 1991, p. 35).

The classic example of efficiency learning is found in early studies of airplane manufacturing. Beginning in the 1920 and 1930s, a number of industrial economists discovered that the costs of airplane manufacturing fell predictably with increased production volumes (Wright, 1936; Arrow, 1962). Increases in production were seen as proxies for greater skill and knowledge accumulated through repetition of performance tasks (Garvin, 2000, p. 94). This phenomenon—labeled the "learning" or "experience"

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<sup>8</sup> The assumption that learning results in improved organizational performance derives from the broader assumption in "behavioral" studies of organizations that organizational learning—and behavior more generally—is fundamentally geared towards "targets" or goals.

curve—was subsequently found in a number of manufacturing industries and other production tasks involving repetition, although learning rates varied considerably across industries, products and time (Levitt & March, 1988, p. 321; Eppler, Argote & Devadas, 1996; Yelle, 1979).<sup>9</sup>

One problem with the efficiency conception of learning is that it disregards instances whereby changes in routines based on the acquisition and interpretation of information fail to improve task performance. As numerous organization theorists have recognized, learning does not always increase effectiveness (Cook & Yanow, 1996; Hedberg, 1991, p. 89). Like individuals, organizations may learn dysfunctional behavior, as when they adopt routines that hinder task performance or require more organizational resources to achieve the same outcome. Productive learning is an important subspecies of organizational learning. However, analysts should distinguish clearly between the two varieties and avoid defining the latter by the former (Argyris & Schön, 1996). Organizational learning may improve task performance, and it may not.

#### Levels of Learning: Tactical vs. Strategic Adaptation

A number of analysts have identified different “degrees” or “levels” of organizational learning. While a variety of terminology has been developed to explain this process the basic idea revolves around the distinction between the goals and objectives of organizational behavior. “Simple,” “low” or “lower,” “single-loop” learning and “adaptation” describe the process by which organizations adjust the means

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<sup>9</sup> Moreover, in some industries production costs have actually increased over time and accumulated experience, thus demonstrating little capacity for learning. The commercial nuclear reactor industry is one notable—and frightening—example (Perrow, 1984, pp. 34-35; Bupp & Derian, 1978).

of behavior in response to environmental feedback.<sup>10</sup> “Complex,” “high” or “higher-level,” “meta-level,” “double-loop” learning, and just plain “learning” all refer to the process by which organizations respond to goal-changing feedback by altering the fundamental values and basic goals that drive organizational behavior.<sup>11</sup> However, the dividing line between simple and complex learning is inherently fuzzy. Within organizations, goals and objectives are ambiguous and frequently change over time. Moreover, the meaning of goals and objectives varies in different parts of the organization. An objective for one part of an organization represents a goal for another. Even worse, different parts of the same organization may have conflicting goals and objectives (Levitt & March, 1988, p. 325; Tetlock, 1991, p. 46).

Distinguishing between the goals and objectives of organizational behavior is tricky business. Yet, it is also true that not all learning is the same. There is a difference between adjusting the day-to-day activities of an organizational subunit and a fundamental transformation in the organization’s *raison-d’etat*. Rather than focus on the nebulous distinction between goals and objectives, an alternative approach is to distinguish between tactical and strategic changes in organizational behavior.

In the discourse on warfare, tactics refer to “small-scale” actions that occur during the course of battle. Strategy refers to the immediate or long-range planning of tactical maneuvers that takes place prior to battle. According to the economic historian, Alfred Chandler, strategy determines “basic long-range goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary for

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<sup>10</sup> Deutsch (1966) and Nye (1987), Fiol and Lyles (1985) and Hedberg (1981), and Arygris and Schön (1978, 1996), and Haas (1990) use these different terms in their respective studies.

<sup>11</sup> Again, Deutsch (1966) and Nye (1987), Fiol and Lyles (1985), Hedberg (1981), Arygris and Schön (1978, 1996), and Haas (1990) use the different terminology.

carrying out these goals” (Chandler, 1962; Scott, 1998, p. 287). Tactics are the procedural and technological means by which organizations implement courses of action. While strategy is the overarching concept, military strategists have long-recognized the causal relationship is not unidirectional. Tactics can influence strategy, as when technological innovations developed on the field of battle lead to changes in strategic planning.

In this study, I am concerned not with armies waging warfare but criminal enterprises that produce, process, transport, and distribute illicit drugs, and the state drug enforcement agencies charged with stopping them. Therefore, the warfare analogy is not without merit. As seen in Chapter 2, *narco-narc* interactions have developed increasing degrees of intensity during the last two decades of the war on drugs. In this context, tactical routines refer to the rules, procedures, conventions, technologies, and inter-subjective understandings used by trafficking enterprises and drug enforcement agencies in carrying out their day-to-day tasks and meeting their immediate objectives in the ongoing “battles” of the drug war. Strategic routines refer to those rules and procedures governing long-range goals and objectives, strategies for achieving these goals and objectives, and basic organizational structures. The latter may include decision-making hierarchies, management layers, and organization subunits.

Most organizational learning takes place at the level of tactical routines. Organizations tinker with tactics in response to—frequently negative—feedback regarding task performance. The information gathering and interpretation costs of tactical learning are relatively minor. If the organization contains a number of alternative routines in its performance program, learning may consist of merely matching the most

appropriate routine to fit the existing contingency in “cybernetic” fashion. Still, even cybernetic adjustment requires human agents (rather than thermostats) capable of recognizing when a routine is no longer appropriate, searching organizational memories to find alternative procedures, and selecting the one with the best chance of producing favorable outcomes.<sup>12</sup>

Organizations that engage in successful tactical adaptations have little need for strategic learning.<sup>13</sup> However, tactical adjustments do not always yield intended results. When organizations experience repeated failure with tactical adjustments, they are more likely to engage in strategic learning (Levy, 1994, p. 286; Tetlock, 1991, p. p. 28). Strategic learning involves changes in existing routines or the creation of new ones dealing with long-range goals and objectives, strategic action plans, decision-making hierarchies, organization subunits, and resource allocation. Strategic learning is more complex than tactical adaptation and less common. Ideas for strategic adaptations may come from within the organization or through search within the ecology of learning that surrounds it. Strategic learning may also include changes in the fundamental assumptions and worldviews of decision-makers and the structure of the organization itself.<sup>14</sup>

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<sup>12</sup> In their treatment of adaptation or simple learning, a number of organization theorists downplay the cognitive effort involved in these actions.

<sup>13</sup> I am grateful to James G. March for clarifying this point to me.

<sup>14</sup> By including changes in “fundamental” values and worldviews under the rubric of strategic learning I am “lumping” where others have split. In particular, Hall distinguishes “second-order” and “third-order” learning and Tetlock distinguishes between “strategic” and “fundamental” learning (Hall, 1993, pp. 278-9; Tetlock, 1991, pp. 29-30). The main reason for lumping the two types has to do with the methodological and theoretical problems in distinguishing between fundamental goals and strategic objectives discussed above.

### Learning under Ambiguity

To this point, the discussion has been deceptively simple. Organizations are described as purposive agents that intentionally create and modify routines through search and trial and error experimentation. However, in the real world of organizational behavior, learning often occurs under conditions of profound ambiguity and uncertainty. At each phase of the process, individuals and organizations confront a variety of psychological and organizational factors that complicate learning: bounded rationality, incomplete and imperfect information, biased inferences, ambiguous experience, and organizational inertia. Recognition of these factors increases our understanding of organizational learning and yields a more accurate and satisfying model of the process.

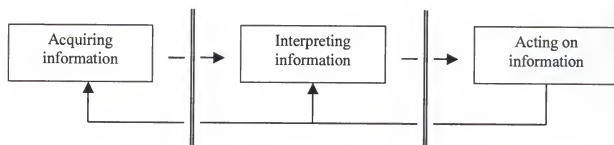


Figure 3-3 Complex Process Model of Organizational Learning

Some difficulties are due to basic limitations in human cognition and coordination. All individuals and organizations operate under conditions of information uncertainty and bounded rationality (Simon, 1997, 1955). Individuals and organizations lack access to perfect information (March, 1999, p. 2). Much about past experience remains unknown, and it is difficult to produce future anticipations based on present actions. Individuals face significant limitations in their ability to analyze feedback from complex environments. They use cognitive short cuts to make sense of the

overwhelming abundance of incoming stimuli. However, these cognitive schemas are based on prior beliefs that bias interpretations in subtle ways.

Within organizations, attention is a scarce resource; the time and effort these collectivities direct towards information acquisition and interpretation is constrained by other needs (March, 1988; March & Olsen, 1988). Because problems influence priorities, attention is often forthcoming only in times of crisis, which means that information acquisition and interpretation are often made under conditions of stress. A number of these general difficulties manifest themselves as organizations acquire, interpret, and apply information and experience to routines.

As they acquire and interpret feedback from their environment organizations are vulnerable to a host of "learning disabilities," including blind spots, filtering, flawed interpretation, and secrecy. Blind spots occur when search is narrow or misdirected, leading managers to miss or misinterpret important feedback signals. Filtering occurs when critical information is ignored or downplayed because it is inconsistent with decision-makers prior beliefs or powerful interests within the organization (Garvin, 2000, pp. 28-29). Organization leaders tend to accept information that attributes success to their own actions and failure to the actions of others or to exogenous sources (Levitt & March, 1988, p. 324). As Scott Sagan notes, problematic situations "are not simply internal data points to be used to improve organizational performance. They are also political events for which credit and blame must be assigned." Interpretation is easily politicized within organizations. Sometimes it may be easier to "kill the messenger" (*i.e.* suppress or distort information) than assign blame to powerful coalitions or individuals (Sagan, 1993, p. 208; Huber, 1991, p. 95). While organizational learning depends on the



assessment of outcomes as successes or failures, decision-makers often reinterpret their goals and objectives in a way that makes them appear successful even when failure is obvious (Levitt & March, 1988, p. 325). Organizations may be more susceptible to blind spots and filtering during periods of crisis, as stress and anxiety further constrain decision-makers' abilities to receive and interpret information (Garvin, 2000, pp. 28-29).<sup>15</sup>

Beyond blind spots and filtering, organizational decision-makers commit interpretation errors because they are "notoriously poor statisticians" (Garvin, 2000, p. 31). Decision-makers tend to overestimate the probability of events that actually occur due to their "recency or saliency." Individuals are often insensitive to sample size, and give too much weight to the intentional actions of decision-makers at the expense of other factors, including chance. Individuals view events as related simply because they occur at the same time. They attribute causality to events that occur in sequence and appear related (Garvin, 2000, pp. 31-32; Levitt & March, 1988, p. 323). These examples, which are by no means comprehensive, indicate that human beings commit a variety of cognitive errors when inferring from experience.

Problems also arise when decision-makers draw on organizational memories to interpret information. Organizational memories are only useful to the extent that they record knowledge and experience in a manner that is both accessible and understandable to participants. Even well organized, easily accessible memories contain inconsistencies and ambiguities. These ambiguities may be attributed to different experiences among

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<sup>15</sup> However, during periods of crisis organizations may also focus a great deal of attention on the problem at hand. The combination of attention resources and the motivation of decision-makers to solve problems that threaten the existence of the organization may result in robust information gathering and lucid interpretation (Eden, personal communication).

members, errors in recording experience, conflicting interpretations of experience, and the challenge of drawing consistent inferences from changing realities (Levitt & March, 1988, pp. 327-328). Even when organizational memories produce clear signals and interpretation is relatively unambiguous, their behavioral implications may not be clear to decision-makers (Garvin, 2000, p. 26).

The failure to share information exacerbates problems of information acquisition and interpretation. Rapid and robust information flows are essential if participants located in different parts of the organization are to make decisions based on the best available data. While poorly organized memories may contribute to weak information flows, many organizations intentionally compartmentalize knowledge in order to protect proprietary information from outsiders. The need to maintain secrecy may be useful if it prevents competitors from obtaining access to production methods and innovations, however, it can also limit the organization's ability to learn from its own and others' experience. If one part of the organization is unaware of the trial and error experience of other subunits, it may be more likely to make similar mistakes; similarly, secrecy between organizations limits vicarious learning (Sagan, 1993, p. 43; Huber, 1991, p. 95).

Difficulties also plague the final phase of the learning process. Even when organizations acquire and interpret information and experience, this knowledge may fail to impact organizational behavior in desired ways. Structural inertia may prevent the organization from adopting innovative technologies and routines that could improve task performance. Organizations often face large "sunk costs" with existing technologies, and therefore may be hesitant to embrace new ways of doing things. Organizations also face internal political constraints to adaptation. Powerful interests within organizations may

support established routines. If decision-makers feel that their interests will suffer by adopting new strategies or routines they may be less likely to do so. To the extent that it occurs, learning remains localized within the organization. Individual decision-makers learn but changes in their belief structures fail to produce organizational change (Argyris & Schön, 1996, p. 17; Hannan & Freeman, 1977, p. 931; March & Olsen, 1988, p. 347).

When decision-makers overcome organizational inertia to apply knowledge to routines, there is still no guarantee that such adaptation will lead to desired outcomes. Organizational learning need not result in improved task performance, which is why it is important to distinguish between productive learning and generic learning. "Competency traps" occur when favorable performance becomes associated with an inferior routine or technology, causing decision-makers to gather more experience with it; even when superior alternatives are available (Levitt & March, 1988, p. 322; March & Olsen, 1989, p. 63). Organizations may be more susceptible to competency traps when external pressure causes them to choose among alternative routines within a relatively short time period. This type of "fast learning" can result in maladaptive specialization within the organization (Levitt & March, 1988, pp. 322-323).

The difficulties described above call into question the assumptions of simple stimulus-response models of organizational learning. Analysts cannot assume that organizations learn as they interact with their task environments. Learning is not automatic, but problematic: It can be blocked at multiple points throughout the acquisition-interpretation-application process. Nor does learning always lead to improved performance or more "intelligent" behavior (March, 1999; Jarosz & Nye, 1993, p. 179). In light of these ambiguities, learning by Colombian trafficking enterprises and

state drug enforcement agencies organizations should be treated as propositions to be confirmed or countered through careful analysis of empirical data. An attitude of cautious skepticism is fully warranted at this stage of the inquiry.

### Properties of Organizational Learning

While most organizations learn, if only in the tactical sense of matching routines to problems, some learn better than others. Students of organizational learning have identified a number of environmental and organizational properties that facilitate (or impede) the process.

### Environmental Hostility vs. Benevolence

As pointed out earlier in this chapter, organizational environments can be distinguished according to their hostility or benevolence. Hostile environments contain two or more interlinked organizations, at least one of which seeks to destroy the other. By contrast, benevolent environments may contain competitors, but they do not seek to destroy each other. A number of organization theorists argue that organizations in hostile environments have strong incentives to respond to negative feedback because, if left unchecked, problems quickly develop into threats to their survival (Hedberg, 1981, p. 14; Popper & Lipshitz, 1998, p. 176). A parallel observation is that the costs of error in hostile environments are potentially severe. Organizations that err in such environments may face extinction at the hands of their competitors (Popper & Lipshitz, 1998, p. 176). This survival imperative overrides other factors that may impede organizational learning, including conflicting goals among participants and organizational inertia (Farkas, 1998, p. 8).

Organizations that operate in benevolent environments do not face such pressures. They have fewer incentives to innovate and improve task performance, both of which require attention and other scarce organizational resources. Organizations in benevolent environments are also prone to organizational inertia, further reducing their ability to learn from potential or actual errors (Hedberg, 1981, p. 14).

P6: Colombian drug trafficking enterprises (and drug enforcement agencies) are more likely to learn if they operate in hostile environments.

P7: Colombian drug trafficking enterprises (and drug enforcement agencies) are less likely to learn if they operate in benevolent environments.

### Organization Size and Decision-Making Hierarchies

A number of organizational factors facilitate or impede learning, including size and levels of management. Size refers to the number of participants that belong to a particular organization. Management levels refer to the number of separate management layers within an organization, top to bottom. Organizations with four or fewer levels of management contain “flat” decision-making hierarchies. Organizations with five or more discrete management layers contain “tall” hierarchies.

Size and management layers influence learning for reasons having to do with the collection and analysis of information. Cognitive schemas, personal interests, and computational limitations hinder participants’ information processing skills. Blind spots, filtering, and biased or mistaken inferences impede the collection and analysis of accurate and reliable data. While organizations require a minimal number of participants to engage in information processing, the greater the number of participants, including entrepreneurs, managers, and workers, that handle information, the greater the probability that it will be manipulated, distorted, or miscalculated in some way. Conversely, the

fewer participants that process knowledge and experience, the less likely it will be subject to these intentional machinations and unintentional processing errors. Once a minimal number of information processing participants has been attained, fewer information handlers increases the speed with which information can be processed, and decisions based on the information can be made. Finally, changes in organizational routines can be selected or discarded more rapidly because feedback travels through fewer minds.

Levels of management influence learning indirectly through their impact on information and decision flows. Management levels structure decision-making processes within organizations. The "taller" the organization, the more management layers information and decisions must flow. Moreover, each management level represents a distinct channel of information processing. The taller the organization, the more information processing channels; the more processing channels, the greater the information's exposure to manipulation, distortion, and miscalculation, whether intentional or not. Conversely, the flatter the organization, the fewer channels through which information and decisions must flow, and the lesser the opportunities for machinations and processing errors. Also, flatter hierarchies increase the speed of information processing and decision cycles. Finally, adaptations in organizational routines can be selected and retained more quickly in flat organizations because feedback flows through fewer processing channels (Argyris & Schön, 1996, p. 187).

To the extent that drug trafficking enterprises and drug enforcement agencies share competitive learning ecologies (Proposition #5, p. 14), their relative size and decision-making hierarchies should exert a significant impact on their ability to learn from one another. In particular, it is expected that smaller, flatter collectivities will be

able to process information and make changes in organizational practices and procedures more quickly than larger, taller organizations.

P8: Smaller organizations learn more quickly than larger ones.

P9: Flatter organizations learn more quickly than taller ones.

### Conclusion

Organizations learn when participants receive, interpret, and apply knowledge and experience to practices, procedures, and performance programs that guide their collective behavior. Organizational memories, including files, correspondence, computers, and inter-subjective understandings, record knowledge and experience in a manner that is accessible to participants. Organizations learn through interactions with other actors that share their task environment, including competitors. In changing organizational routines through information gathering and analysis, participants encode the lessons of collective experience.

Learning is not the only source of organizational change. Practices, procedures, and performance programs may change due to power and environmental selection. When learning does occur, it is often under conditions of profound ambiguity. Participants struggle to make sense of ambiguous experience. They make decisions based on incomplete or inaccurate information. They also face limitations in their computational abilities, and often make inaccurate and biased inferences. These ambiguities hinder organizational learning, particularly in large bureaucracies with tall decision-making hierarchies. Environmental benevolence obstructs learning by reducing the incentives for innovation and increasing the tendency towards organizational inertia. Even when organizations manage to overcome these ambiguities and alter their practices and

procedures in response to feedback, such change does not inevitably lead to improved task performance or more intelligent behavior. Organizations are capable of learning “wrong” as well as “right” lessons, and adopting inferior as well as superior routines.

In light of these alternative explanatory variables and organizational and environmental impediments to learning, the propositions outlined in this chapter should be viewed cautiously at this stage of the inquiry. Drug trafficking enterprises and drug enforcement agencies may learn, or they may not. Both sets of actors face significant obstacles to learning. The remainder of this study seeks to determine whether these state and non-state organizations learn, and, if so, analyze the conditions under which this process occurs.



## CHAPTER 4

### ORGANIZATIONAL ANALYSIS OF THE ILLICIT DRUG INDUSTRY IN COLOMBIA

The production, transportation, and distribution of illicit drugs are social activities. Processing cocaine base into cocaine hydrochloride or opium gum into heroin; shipping refined narcotics from one country to another; selling drugs to independent wholesalers; collecting, "laundering" and repatriating proceeds from drug sales: all of these activities require planning and coordination among various interdependent conspirators. Although the scope of social organization varies by activity and the amount of product under exchange, even the most rudimentary transactions in the transnational drug trade require the coordination of numerous like-minded individuals. Of course, coordination alone does not a criminal organization make. While drug trafficking involves coordination among participants, less clear are the organizational forms such coordination takes.

The purpose of this chapter is to examine Colombian trafficking enterprises from the perspective of organization theory. The task is an important one, and stands prior to the inquiry that drives this study. We cannot consider whether trafficking enterprises learn in an organizational sense until we first understand how they are structured and function. Unlike the large drug enforcement bureaucracies maintained by contemporary states, trafficking enterprises cannot be assumed to operate as formal organizations. Smuggling operations often exist on an *ad hoc* basis, with participants going their separate ways following completion of a single transaction. Even when they develop

infrastructures that support iterated transactions, Colombian trafficking enterprises demonstrate fluidity in form and function that defies easy classification.

What is the extent of social organization within these enterprises? Do Colombian trafficking groups pursue mutually agreed upon aims or tasks? Do they contain customs, rules, and procedures that guide participants' behavior? To what degree are these routines formalized? What can be said of their task environment and the technologies they use to perform their activities? To what extent does their external milieu shape their internal structures and operations? Consistent with the structure of the concept of social organization presented in Chapter 3, the following pages explore the illicit drug industry in Colombia according to the tasks, environments, structures, participants, and technologies of the criminal enterprises that coordinate it.

### Tasks of Colombian Trafficking Enterprises

Criminal organizations exist to profit from the transaction of goods and services that have been declared illegal by nation-states (Southerland & Potter, 1993, p. 251; Reuter, 1983). In addition to attaining satisfactory or "positive" profits, trafficking enterprises seek to increase market share, and minimize their exposure to risk and uncertainty.<sup>1</sup> To achieve these goals, trafficking enterprises provide illicit drugs for consumer markets, launder and repatriate revenues from these activities, and supply auxiliary goods and services. From the site of production (farm) to the point of consumption (arm), entrepreneurs and enterprises engage in a series of transactions along

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<sup>1</sup> My usage of the terms satisfactory or "positive" profits rather than maximized profits is intentional and is based on a rejection of the standard profit maximization assumption found in neoclassical economic theories of the firm. The distinction is not superfluous: some students of organized crime base their analyses on these widely rejected neoclassical assumptions. In a oft-cited essay on transnational criminal organizations, Peter Lupsha claims that the "goals of organized crime are typical of those of any rational actor in market systems, the maximization of wealth, influence and power and the minimization of risk" (Lupsha, 1996, p. 34). For theoretical discussion of the unrealistic and unnecessary nature of the profit maximization assumption, see Alchian (1950) and Moe (1984).

a transnational commodity network. The target-oriented tasks of participating enterprises are contingent on the specific good or service they supply. The task of purchasing groups is to buy coca paste, cocaine base or opium gum from farmers or intermediaries and transport them to processing laboratories for further refinement.<sup>2</sup> Processing groups turn semi-refined substances, such as coca paste, cocaine base, opium gum and morphine, into fully refined narcotics, such as cocaine hydrochloride and heroin.<sup>3</sup> Transportation rings send finished drugs to international transshipment points or directly to consumer markets through a variety of smuggling methods. Importation groups receive shipments of cocaine and heroin in consumer markets and distribute them to independent wholesalers. Brokers arrange transactions among different participants, such as exporters and importers, or importers and wholesalers. Money launderers receive illicit proceeds from wholesale or retail transactions and "clean" them through the international banking system. Along each "node" of the production-processing-transportation-distribution-

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<sup>2</sup> This description of the narcotics industry begins at the purchasing link because in Colombia independent farmers that do not belong to trafficking groups generally grow coca and opium poppies. During the 1980s and 1990s, there were some reports of leaders from core organizations providing seeds, fertilizers and technical assistance to small-scale farmers, in return for the right to purchase the ensuing crop at pre-determined prices. However, even under these circumstances, farmers were not direct participants in trafficking enterprises.

<sup>3</sup> Cocaine processing occurs in three stages. In stage one, the raw material of coca leaf is processed into coca paste, a rudimentary derivative that contains a concentration of desired alkaloids but many undesired impurities as well. In stage two alkaloids are further concentrated and some impurities are removed as coca paste is refined into cocaine base. The latter substance is still unsuitable for human consumption, at least by the exacting standards of First World cocaine consumers, thus requiring another round of processing. In stage three, more impurities are removed, as cocaine base is refined into the finished product, cocaine hydrochloride or cocaine, which can be consumed by inhalation or injection. In the Colombian industry, drug farmers frequently process coca paste to cocaine base right on the farm. Coca paste is bought by purchasing groups that transport the product to processing labs. There is some variation at this phase of the Colombian industry. Some laboratories just process paste to base. The cocaine base then goes to other labs that complete the final process stage. Other laboratories handle both the second and third processing stages, converting paste to base and base to cocaine hydrochloride.

laundering network, organizations complete their tasks for the purpose of attaining satisfactory profits and other benefits, and avoiding unnecessary risks.<sup>4</sup>

The core organizations that dominated the Colombian cocaine trade from the late 1970s through the mid-1990s, the so-called fourth phase of the industry discussed in Chapter 2, were multi-task enterprises that functioned along several nodes in the transnational commodity network. A number of core organizations purchased cocaine base, processed base to cocaine hydrochloride, acquired aviation and maritime vessels, arranged debarkation points, recruited financiers for multi-ton shipments, transported cocaine (often through transit points) to consumer markets in other countries, and warehoused and distributed cocaine to independent wholesalers. In addition, core enterprises procured front companies, laundered and invested their illicit profits, regulated transactions, provided security and contract enforcement, gathered intelligence on government drug enforcement efforts, and suborned law enforcement and military officials and members of the Colombian political class (Zabludoff, 1997, p. 49).

The illicit drug industry in Colombia can be represented as a circular network that takes the form of a wheel (see Figure 4-1 below). During the fourth phase of the Colombian drug trade, core organizations served as axles to their respective networks, coordinating activities among different production, transportation, distribution, and

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<sup>4</sup> A network is "a series of nodes that, in one way or another, are connected together. The nodes can be individuals, organizations, firms, or even computers, but the critical point is that there are significant linkages among them. Networks vary in size, shape, membership, cohesion and purpose. Networks can be large or small, local or global, domestic or transnational, cohesive or diffuse, centrally directed or highly decentralized, purposeful or directionless. A specific network can be narrowly and tightly focused on one goal or broadly oriented towards many goals; and it can be either exclusive or encompassing in its membership" (Williams, 1998, p. 74; also see Castells, 1996; Powell 1990; Ronfeldt, 1996; and Arquilla & Ronfeldt, 1999). In this study, Colombian drug networks are composed of individuals and organizations interlinked for the purpose of producing, transporting and distributing narcotics and laundering illicit proceeds. While they vary considerably in size, shape, and structure, they are generally transnational, as their illegal activities cross national boundaries.

money laundering groups. Discrete groups interacted with each other, and the core enterprise, in completing their assigned tasks. Thus, purchasers of coca paste would transact with drug farmers that produce this commodity, and processing laboratories that manufacture cocaine hydrochloride. Processing labs, in turn, would transact with paste purchasers (backward linkages) and exporters/transportation coordinators (forward linkages) in carrying out their activities. In this fashion, these transnational networks turned, symbolized in their circular structures.

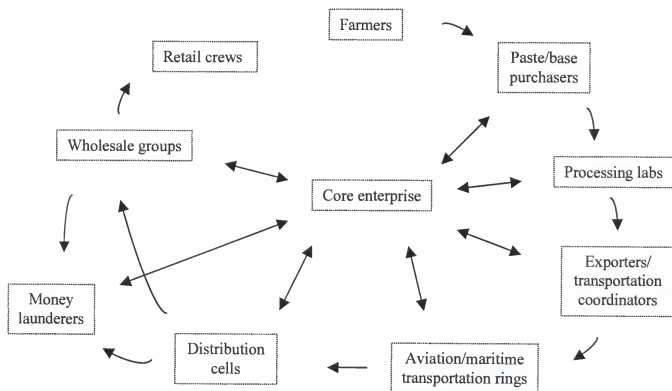


Figure 4-1 "Wheel" Structure of Illicit Drug Network

To the chagrin of government officials, the post-cartel phase of the Colombian drug industry demonstrates that these transnational networks can function without axes. Even as drug enforcement agencies dismantled the major core organizations based in

Medellín and Cali, medium-sized and smaller groups that avoided the crackdowns capitalized on the opportunity to increase their market share (see Chapter 2). In the current phase of the country's drug industry, independent enterprises, now free of the overarching authority of a Pablo Escobar or Gilberto Rodríguez Orejuela, continue to transact with their respective suppliers and buyers. In effect, these transnational networks have become self-organizing.

### Understanding Tasks in Colombian Trafficking Enterprises

While it is difficult to ascertain the degree to which tasks are understood within clandestine criminal organizations, there are indications that participants in Colombian trafficking enterprises appreciate the goals and objectives of their illicit activities. One respondent in this research, a former member of one of the Cali core organizations, argues that his organization was composed of many little offices, "each with their own purpose, but all of them working for the same objective" (Emil, 2000). Emil also pointed out that the objective of his group was to transport cocaine from Central America and other transshipment points to the U.S.<sup>5</sup>

In testimony before the U.S. House Subcommittee on Crime, a former low-level member of a Medellín enterprise remarked that the "main purpose" of this organization was "to ship drugs" ("Mr. Rodríguez," 1997, p. 5). A black market peso broker interviewed in the *Frontline* documentary, "Drug Wars," pointed out that the fundamental purpose of his business was to "buy money, and sell it for a profit" ("David," 2000). Other former direct participants in Colombian trafficking groups offer detailed descriptions of the production, processing, and transportation tasks undertaken

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<sup>5</sup> To preserve their anonymity, I provide many respondents with fictitious names. Pseudonyms are used throughout the text and are listed in the bibliography and Appendix A.

by their respective enterprises. As these examples suggest, even relatively low-ranking participants understand the collective goals and objectives towards which their daily activities are directed (Betancourt, 1998; Homero, 2000; Néstor, 2000; "Statement of Witness," 1989; "Steve," 2000; Toro, 2000; Valdés, 2000).

### Environments of Colombian Trafficking Enterprises

In pursuing their aims, trafficking enterprises interact with a variety of state and non-state actors. The organization set of a typical trafficking group includes suppliers of materials, capital and technology, buyers of finished goods, adversaries that compete for resources, market share and profits, and drug enforcement agencies that seek to dismember them. Within these organization sets, relations among interdependent actors are dynamic, uncertain, and often hostile. The illegal nature of drug trafficking adds to the environmental hostility confronting narcotics enterprises. These criminal organizations operate outside the rule of law, transacting in goods and services that are not only illegal but also governments have defined as national security threats. In recent years, the task environment for many Colombian enterprises has become increasingly hostile as Colombian and U.S. drug enforcement agencies identify and apprehend prominent targets.

### Trafficking Enterprises and Law Enforcement Agencies

Colombian trafficking enterprises and government drug enforcement agencies contain diametrically opposed aims. The purpose of trafficking enterprises is to provide illegal drugs to consumer markets. The purpose of drug enforcement agencies is to reduce illicit drug flows and dismantle the criminal enterprises that engage in this illicit

commerce.<sup>6</sup> To survive, these competitors rely on contributions from other actors in their respective organization sets. Trafficking enterprises stay in business by attaining sufficient profits from buyers of their illicit products (and avoiding government efforts to dismember them). Drug enforcement agencies stay in business by receiving annual budgets sufficient to implement their policies and programs.

In Colombia and the U.S. hundreds of government agencies seek to identify and dismantle trafficking enterprises. These include drug enforcement bureaus, military organizations, prosecutors' offices, and other government agencies that spray drug plantings, destroy processing laboratories, seize psychoactive drugs and precursor chemicals, interdict drug shipments, confiscate illicit earnings, and investigate, apprehend, prosecute, and incarcerate participants. In Colombia, several independent directorates of the Colombian National Police (CNP), the Department of Administrative Security (DAS), and joint military-CNP units specifically target trafficking enterprises. The National Prosecutor's office (*Fiscalía General*), the Attorney General's office (*Procuraduría General*), the National Directorate of Dangerous Drugs, and various branches of the Colombian military also participate in drug enforcement (see Table 4-1).

In the U.S., there are 17,000 federal, regional, state, local, and tribal law enforcement agencies, many of which are directly involved in drug enforcement. At the federal level, government agencies with a primary role in counter-narcotics efforts include the Drug Enforcement Administration, the Office of National Drug Control Policy, the Federal Bureau of Investigations, the Central Intelligence Agency, the

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<sup>6</sup> In a recent statement to the U.S. Senate Caucus on International Narcotics Control, the director of the Drug Enforcement Administration stated that his agency's mission is to "identify, target, and dismantle the most powerful drug syndicates operating around the world who are responsible for supplying drugs to American communities" (Marshall, 2001a).



National Security Council, the Customs Service, the Financial Crimes Enforcement Network, the U.S. Attorney offices, and several inter-agency task forces such as the Organized Crime Drug Enforcement Task Forces, the Joint Inter-Agency Task Force, and the DEA's Special Operations Division, not to mention hundreds of state and local police organizations. In addition, agencies from the departments of Defense and State participate in drug eradication and interdiction efforts in Colombia and the Caribbean, particularly the Bureau of International Narcotics and Law Enforcement Affairs, the Coast Guard, the Army Special Forces, and the U.S. Southern Command (see Table 4-1). With the combined efforts of these organizations, the U.S. government represents a formidable foe for trafficking enterprises operating in the U.S. In South Florida alone, an area where Colombian trafficking enterprises have traditionally maintained a strong presence, there are over twenty federal law enforcement organizations and 120 state and local police agencies (Hutchinson, 2001; U.S. Attorney's Office [no date]).

Outside of warfare, it is hard to imagine a more hostile relationship than that between drug traffickers and drug enforcers. Law enforcement agencies exist to dismantle trafficking groups. The latter survive only to the extent that they can avoid or re-direct the intentions of the state. Indeed, relationships between these actors fit the actual definition of warfare: drug enforcers and drug traffickers engage in armed interactions for the purpose of undermining or destroying each other. Police agencies monitor the telecommunications of suspected traffickers, conduct undercover sting operations, raid stash houses, destroy drug processing laboratories, coerce business associates to turn against their fellow conspirators, and hunt down and kill leading

traffickers.<sup>7</sup> Colombian trafficking enterprises monitor the telecommunications of police agencies, infiltrate the same organizations through paid informants, suborn law enforcement and military officials, prison authorities, public prosecutors, judges and politicians, kidnap and assassinate honest officials, and detonate car bombs at government offices.<sup>8</sup>

Table 4-1 National Government Agencies Involved in Drug Enforcement

Unites States	Colombia
Drug Enforcement Administration (DEA)	Colombian National Police (CNP)
Office of National Drug Control Policy	Directorate of Anti-Narcotics
Federal Bureau of Investigation	CNP Directorate of Intelligence
Customs Service	CNP Directorate of Operations
Central Intelligence Agency	CNP Directorate of Judicial Police
National Security Council	Department of Administrative Security
Bureau of International Narcotics and Law Enforcement Affairs	National Prosecutor's Office
Agency for International Development	Attorneys General Office
Marshals Service	National Directorate of Dangerous Drugs
Financial Crimes Enforcement Network	National Alternative Development Plan
Coast Guard	Colombian Coast Guard
Bureau of Alcohol, Tobacco and Firearms	Colombian Navy
Secret Service	Colombian Army
Internal Revenue Service	Colombian Air Force
U.S. Attorney Offices	Colombian Marine
National Security Agency	
U.S. Army	
U.S. Navy	

<sup>7</sup> Numerous examples of each activity have been found in this research from primary and secondary materials. For example, several cocaine entrepreneurs, including Pablo Escobar, Gonzalo Rodríguez Gacha, and José Santacruz Londoño, have been shot and killed in Colombia by the police and armed forces while attempting to avoid apprehension (Serrano Cadena, 1999; Cañón, 1994; Velásquez, 1993; Gallego Castrillón 2000).

<sup>8</sup> Specific examples can be found in Gugliotta & Leen (1989), Lee (1989), Rice (1989), Pallomari (1997, V. 38), Thoumi (1995), and Treaster (1989).

### Other Organizations in the Task Environment

In addition to drug enforcement agencies, trafficking enterprises interact with a host of independent suppliers, competitors and customers. Suppliers include drug farmers and processing labs that produce semi-refined narcotics, import-export companies that supply precursor chemicals to process narcotics, investors that finance drug shipments, smuggling rings that transport drugs from South America to the U.S. and other countries, financial service groups, banking institutions, and economic firms that launder and repatriate drug profits, and law firms that provide legal services to entrepreneurs and apprehended participants. Competitors include criminal organizations based in Colombia, Mexico, the Dominican Republic, and other locations that contend for market share and profits in wholesale drug markets. Other rivals in Colombia include paramilitary organizations and guerrilla fronts that compete for resources and market share at the processing and exportation stages of the industry. Customers include wholesalers that purchase cocaine and heroin in multi-kilogram quantities, and importation groups in Mexico, the Caribbean, and Canada that complete the international transportation process.

The task environment confronting Colombian trafficking groups operate is as hostile as anything in the organizational literature. Trafficking groups face exposure from drug enforcement agencies, competitors, suppliers, even customers. Government agencies destroy processing labs, interdict drug shipments, seize illicit profits, and apprehend participants. Trafficking enterprises compete for market share and profits with other criminal, guerrilla, and paramilitary organizations in Colombia and elsewhere. Many of their non-state rivals operate outside the rule of law, making competition

particularly intense. With few bureaucratic or legalistic constraints to action, criminal adversaries use deception, intimidation, and violence to defeat their opponents.

Traffickers are vulnerable to theft and robbery from suppliers, customers, corrupt police officials, even their own associates. When apprehended by police authorities, associates may turn state's evidence and share their knowledge of the enterprise with law enforcers. In the face of such hostility, it is remarkable that some enterprises survive for months, even years, on end. The puzzle of longevity is explained, in part, by their ability to develop practices and procedures that minimize their exposure to hostile adversaries. These social structures are described in detail below.

### Structure of Colombian Trafficking Enterprises

Trafficking enterprises contain values, norms, roles, rules, practices, and procedures that structure relations among participants. These relations shape how they make decisions, perform tasks, and communicate information. Trafficking organizations draw on routines to process narcotics, organize shipments, distribute drugs, collect and launder proceeds, send profits back to Colombia, assess responsibility for lost shipments, recruit new members, and perform a host of other drug-related activities.

Formalization of structure varies among enterprises. Criminal organizations that complete multiple transactions over a number of years develop more elaborate norms, decision-making hierarchies, and procedures than *ad hoc* groups that come together for the purpose of conducting a single transaction (Calderón, 2000; Curtis & Wendel, 2000). Routines develop through the accumulation of experience as trafficking enterprises conduct repeated transactions over time. Organizations that transact in large quantities of illicit drugs, such as the core cocaine enterprises, develop more elaborate structures than

small-scale enterprises. The logistical challenge of moving multi-ton quantities of drugs through hostile environments requires numerous routines to reduce risk and uncertainty. Of course, all criminal groups face risk, and even small-scale, *ad hoc* enterprises require basic rules and procedures to coordinate behavior among multiple participants, while reducing their exposure to law enforcement authorities and other sources of uncertainty.

The illicit drug industry in Colombia is composed of hundreds of criminal enterprises, none of which are identical. This caveat notwithstanding, it is possible to identify a number of similarities among the enterprises examined in this research. Trafficking enterprises contain centralized but “flat” decision-making hierarchies. Roles are multi-faceted, with participants often performing a variety of tasks. Many enterprises, particularly the core organizations, are compartmentalized into “cells,” small groups that carry out much of the work of the organization. Finally, trafficking enterprises contain intricate rules and procedures for carrying out their activities, although participants do not always adhere to these routines. In recognition of their significance, I elaborate on each of these organizational features below.

#### Centralized Decision-making Hierarchies

Drug trafficking organizations have one or more leaders that exercise decision-making authority over other participants. This is true of small operations that contain only two or three members, *ad hoc* groups that form for single transactions, and large organizations with dozens, if not hundreds, of participants. Centralized decision-making hierarchies often characterize Colombian trafficking groups. In these enterprises, leaders make almost all decisions regarding organizational strategy. They determine production and shipment quantities, methods of conveyance and concealment, wholesale customers

and prices, money laundering schemes, and a host of other business-related decisions. Lower-ranking participants carry out these decisions, their actions carefully managed through regular communication with their supervisors and elaborate routines (more on this below), and the presence of other participants. While mid-level managers in may suggest improvements in tactical routines, they are generally careful to clear any changes with the higher ups back in Colombia. Some leaders monitor cell managers by assigning trusted participants to provide "assistance," when their real function is to keep an eye on things and report back to the entrepreneur (Reyes, 2000).

In some organizations, leaders make tactical decisions, managing day-to-day activities and problems that develop in the course of clandestine operations. Some leaders have a tendency to micro-manage their operations, communicating with their overseas representatives on a daily basis regarding the more mundane details of international drug trafficking.<sup>9</sup> Not surprisingly, the tendency to micro-manage and centralize decision-making is more pronounced in activities that are most vulnerable to robbery and disruption, such as the repatriation of drug profits (Arreguin, 2000; Evans, 2000; Francis, 2000; Sanchez, 2000; Reyes, 2000; Thompson, 2000).

However, not all Colombian-based entrepreneurs are detail-oriented managers. In some enterprises, upper-level participants, such exportation managers or chief overseas representatives, enjoy considerable decision-making authority regarding day-to-day

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<sup>9</sup> One of the leaders of a Cali-based core organization, Miguel Rodríguez Orejuela, was well known among drug enforcers for his tendency to micro-manage every aspect of his vast criminal operations, including such minutia as the best corner of a certain vegetable box for hiding cocaine. Several DEA officials interviewed stress that Rodríguez Orejuela's decision-making style came back to haunt him as they were able to record incriminating phone conversations between the entrepreneur and his U.S.-based subordinates (Arreguin, 2000; Evans, 2000; Francis, 2000; Sanchez, 2000).

activities. Entrepreneurs stay abreast of overall operations but intercede only when significant problems develop (Thompson, 2000).

Given the large sums of money leaders invest in their drug shipments and the numerous vulnerabilities facing all transactions, it is not surprising that leaders wish to concentrate decision-making authority in their own hands. This is one way leaders seek to avoid risk and uncertainty.<sup>10</sup> Centralized decision structures also serve the interests of mid-level managers and low-level participants. When something goes wrong, as it often does in such a high-risk activity, centralization allows participants to defer responsibility to their supervisors. It is more difficult to hold participants accountable (financially or otherwise) for problems that develop from following the boss' orders. If decision-makers are competent, participants that face the greatest exposure to drug enforcement efforts stand to benefit from closely adhering to their supervisor's orders.

#### "Flat" Decision-making Hierarchies

While decision-making hierarchies in many Colombian trafficking enterprises are centralized, they also tend to be organizationally "flat." Small and large trafficking enterprises contain few management levels. Small organizations typically contain two or three layers of hierarchy. At the top is the leader who gives the orders. At the bottom are the workers that carry them out. Sometimes a trusted intermediary stands between the two to communicate information that could be used to incriminate the leader in a criminal conspiracy.

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<sup>10</sup> However, centralization of authority may also serve to increase the risks facing entrepreneurs, as the case of Miguel Rodríguez-Orejuela demonstrates. This apparent contradiction may be explained by a subtle but important psychological factor. As in legitimate organizations, leaders of successful criminal organizations may be prone to over-estimating their decision-making skills. Thus, an entrepreneur such as Rodríguez-Orejuela may think that he is reducing the amount of uncertainty facing his enterprise by accepting greater personal responsibility for decision-making at all levels of operations, when, in reality, he only ends up increasing his own exposure to law enforcement.

Large trafficking organizations often contain three or four management layers, composed of the following: (1) leader(s), (2) cell manager/chief overseas representative, (3) assistant managers/cell section leaders, and (4) cell or field workers. Many operations lack assistant managers, reducing the number of management layers to three. In these operations, field workers report directly to the cell manager. In other enterprises, an intermediary, sometimes designated as “exportation manager,” insulates the leader by communicating directly with cell manager(s). This person may or may not exercise significant decision-making authority independent of the leader. A senior-level advisor or investor with long-standing experience in the drug trade may also assist the enterprise leader. However, this person only serves in an advisory capacity, providing information and contacts to the leader (Brandy, 2000; Fuentes, 1998; Natarajan, 2000; Thompson, 2000).<sup>11</sup>

Whether they contain three or four management layers, Colombian trafficking enterprises are organizationally flat, facilitating rapid information flows and decision cycles. Leader’s decisions are communicated quickly to managers and participants, and the knowledge contained in new practices, rules, and procedures diffuses rapidly through the enterprise. Flat hierarchies also limit opportunities for information suppression or manipulation. There are fewer managers to inflict their biases or deliberately distort communication from enterprise leaders. Few information choke points and quick decision cycles translate into rapid response rates. Flat trafficking enterprises are structurally suited to quickly adapting their practices and procedures in response to feedback, an essential attribute for organizations operating in hostile environments.

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<sup>11</sup> Numerous investors are former leaders of their own enterprises that have subsequently “retired” from direct participation in the business.



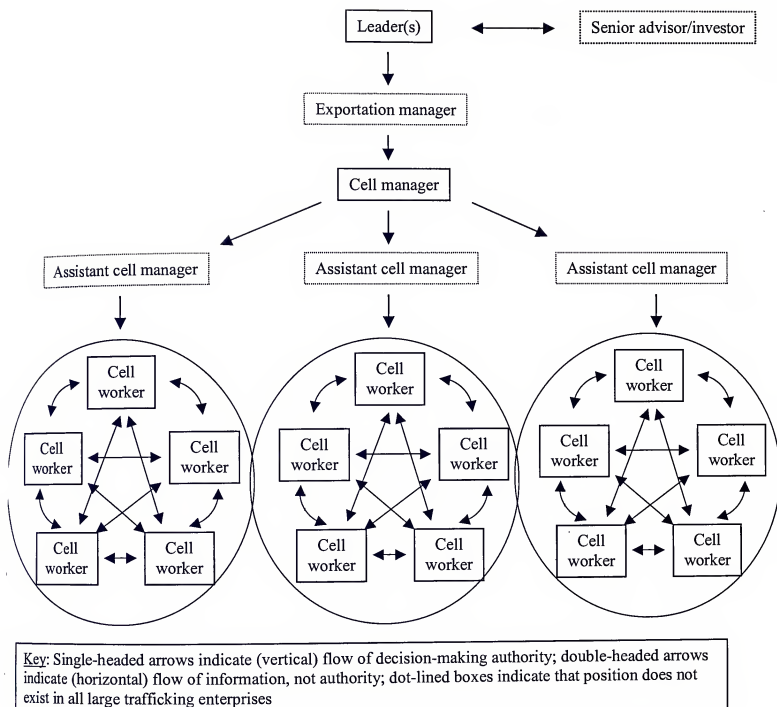


Figure 4-2 Management Levels within Large Trafficking Enterprise

Figure 4-2 diagrams the organizational hierarchy of a hypothetical large-scale trafficking operation. Many core organizations maintain numerous distribution and transportation

groups in consumer markets, which are represented in the three cells in the diagram.

### Role Specialization

Role specialization within trafficking enterprises varies according to the size and task complexity of the operation. Small enterprises that supply a single good or service, such as providing precursor chemicals to processing laboratories or processing cocaine base into cocaine hydrochloride, contain less role specialization than large organizations involved in a variety of processing, transportation and distribution tasks. Transaction quantity and frequency also influences functional specialization. The larger and more frequent a transportation ring's drug shipments, the more roles leaders will develop to complete these transactions. In well-managed trafficking enterprises, leaders and managers attempt to match participants with roles that suit their experience, training, and skills. In large, well-established enterprises, roles tend to be stable and survive considerable participant turnover. In small, nascent groups or *ad hoc* operations roles are contingent on individual members and may not survive participant turnover (Fernandez, 2000; Thompson, 2000; Vargas, 2000).

One small-scale, multi-task enterprise active in the 1970s relied on a system of couriers and mail packages to ship between two and four kilograms of cocaine hidden inside specially prepared wooden handcrafts. This operation, described in detail by Robert Sabbag, included the following roles: a leader based in New York, a coordinator of operations in Colombia, a carpenter, several couriers, and a receiver of the merchandise in New York. Three people—the leader, the Bogotá-based coordinator and the carpenter—formed the nucleus of the operation, with each one performing multiple support and line functions, such as purchasing cocaine from suppliers, packing cocaine

inside the handcrafts, even writing “love letters” as a cover for postal shipments (Sabbag, 1990, pp. 144-146).

Organizations that transact in greater quantities of drugs develop more elaborate roles. One enterprise studied in this research sent multi-kilogram quantities of cocaine and (to a lesser extent) heroin to the U.S. and Spain through a network of human couriers during the 1990s.<sup>12</sup> The organization contained approximately twenty members that occupied a variety of roles, as detailed in Table 4-2.

Table 4-2 Role Specialization in Colombian Trafficking Enterprise

Role	Task(s)
Leader	Oversaw entire operation, providing managerial assistance as needed (based in Colombia, but previous trafficking experience in U.S.)
Investors	Invested money in the organization's drug shipments but they were not directly involved in the day-to-day criminal activities (at least two people fulfilled this role)
Buyer	Purchased cocaine and heroin from independent organizations (this enterprise did not process narcotics but purchased them fully refined)
Recruiter	Recruited human couriers and provided them with the necessary documentation, including passports and visas
Packer	Compressed cocaine and heroin into digestible capsules using hydraulic press
Enforcer	Used intimidation and violence to enforce transactions and resolve disputes (i.e. coerce people that owe the enterprise money for drugs pay up)
Trainer	Prepared human drug couriers in swallowing capsules, dealing with law enforcement, spotting potential problems
Couriers	Transported small amounts of drugs from Colombia to the U.S. or Spain, sometimes by way of Aruba or Venezuela, most couriers ingested capsules and hid narcotics in personal luggage
Receiver/ Wholesale distributor	Received couriers in the U.S. or Spain, brought them to private location where they could expel their cargo. Receiver also responsible for selling drugs to independent wholesalers

<sup>12</sup> During an interview with a Colombian drug enforcement agent, I was allowed access to intelligence reports on this organization, which had recently been dismantled by the Colombian National Police. I was allowed to take written notes as I read through the documents and ask questions of the police official assisting me.

### Compartmentalization

The need to avoid drug enforcers and illicit competitors has led many leaders to compartmentalize their criminal operations into discrete cells. Cells are designed to protect the enterprise from penetration by law enforcement authorities and other adversaries, and to limit the damage of infiltration when it does occur. These units are generally quite small, composed of more than two but fewer than ten participants. The number of cells in an organization is a function of the size and frequency of transactions conducted by the enterprise. Core organizations that coordinate numerous multi-ton drug shipments per year and maintain wholesale distribution networks in consumer markets contain cells in different parts of the U.S., Europe, Mexico, and Colombia.

Cells operate as quasi-autonomous units. They perform their activities isolated from other parts of the transnational enterprise. Cells communicate with leaders based in Colombia, but limit their interaction with other cells. Cell workers may be aware only of the other members of their unit, and know relatively little about the rest of the enterprise. Even within cells, information is restricted on a need-to-know basis. Cell workers, assistant managers, and managers possess the minimal information they need to carry out their duties. This allows leaders to minimize the damage to their enterprise if workers or even managers are apprehended by law enforcement and turn state's evidence.

In highly compartmentalized operations, only the highest-ranking figures possess comprehensive knowledge of the structures and functions of the entire enterprise. These leaders are often located at the home office in Colombia, reducing (but not eliminating) their exposure to law enforcement. Moreover, in trafficking enterprises knowledge is power. Leaders understand that their authority stems, in part, from greater knowledge of

their trafficking operations, and reserve for themselves full information of the criminal enterprise, including the identities of important suppliers and customers (Fernandez, 2000; Fuentes, 1998; Gale & Rodríguez, 2000; Homero, 2000; Montero, 2000; Olson, 2000; Thompson, 2000; Valencia Tovar, 2000; Zabludoff, 1997, p. 31).<sup>13</sup>

### Routines in Trafficking Enterprises

Routines are a fundamental part of the social structure of Colombian trafficking organizations. Rules and conventions provide prescriptions and proscriptions for conduct, while practices and procedures coordinate individual actions into criminal conspiracies. Trafficking organizations have promulgated a variety of rules for their participants, many of which reflect commonsensical conventions regarding enterprise security. In many enterprises, participants are prohibited from discussing business with non-participants, including members of other trafficking groups. They are expected to maintain a low profile and avoid attracting unwanted attention, particularly when conducting criminal activities. If apprehended, participants must refuse to cooperate with law enforcement authorities, and stealing is strictly forbidden. Although these norms and rules are not formally codified in documents, they are widely understood among participants. Some enterprises hold meetings in which leaders or managers inform workers of the norms and rules of behavior, and warn them of the consequences for violating these injunctions (Aero, 2000; Arenas, 2000; Emil, 2000; Fuentes, 1998, pp. 155, 161; Henderson, 1992, p. 91; Kacerovsky, 1994; Pallomari, 1997 Vols. 36, 40; Third Superceding Indictment, p. 15; Valdés, 2000).

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<sup>13</sup> The restriction of information flows within Colombian trafficking enterprises contains obvious and important implications for their ability to learn from previous experience and knowledge. These implications will be analyzed in the following chapter.

Trafficking organizations develop routines to achieve a wide variety of activities. Enterprises have developed practices, procedures and performance programs to recruit participants, process, transport and distribute illicit drugs, collect and launder proceeds, evade drug enforcers, communicate information among participants, record transactions, respond to problems, plan future activities, and determine responsibility for failed transactions. Many routines are designed to minimize traffickers' exposure to law enforcement authorities and other adversaries (see Table 4-3).

Trafficking routines emerge over time through repeated interactions among participants. Indeed, routines are repositories of criminal experience. Trafficking enterprises tend to accumulate more routines over time, allowing them to expand and diversify their performance programs. An organization with ten years experience generally has more smuggling routes and shipping methods in its transportation repertoire than a two-month operation. Trafficking enterprises develop practices and procedures that allow them to achieve desired ends effectively, but not necessarily efficiently. Many transportation routes are wildly inefficient, proceeding through multiple transit points and shipping modalities before reaching the final destination. These roundabout routes are designed to circumvent areas with greater law enforcement activity.

In his autobiography, Max Mermelstein provides a detailed description of an inventory routine used by his enterprise to store cocaine in stash houses prior to wholesale distribution. The action begins as Mermelstein and his supervisor, Rafa, arrive at one of the organization's stash houses following the completion of separate performance programs for transporting cocaine from Colombia to the U.S. by general aviation aircraft and delivering the load by car to a stash house in North Miami:

Table 4-3 Risk Reduction Routines in Colombian Trafficking Enterprises

Compartmentalize structures and communication flows	Gather information about law enforcement activities
Limit the size of trafficking operations (both in terms of numbers of participants and the size and frequency of drug shipments)	Use coded language and aliases to communicate details of impending transactions
Recruit family members and close friends as conspirators	Corrupt strategically placed police, military and judicial officials
Require potential recruits and wholesale customers to provide information regarding their immediate family members	Contribute to election campaigns of Colombian politicians
Pool resources among multiple entrepreneurs and investors (la apuntada, described in Chapter 2)	Lobby government officials over impending legislation that affects traffickers' interests
Provide insurance against drug enforcement interdiction	Build grass-roots social support through philanthropy and public works
Use multiple routes and shipping modalities simultaneously	Use threats and violence against those that threaten the security of the enterprise
Design transportation and delivery routines that minimize contact among lower-level participants	Carry out bombing campaigns, kidnappings, assassinations and other violent acts against current and former government officials, their families, and innocent civilians

Even as we were walking in the front door, the two drivers were unloading their cars in the garage. They piled up the duffel bags on the floor of the adjacent laundry room. Each was full of football-shaped duct-taped packages containing one kilo of coke inside one Ziploc bag inserted into a second Ziploc bag, reinforcing it. I followed Rafa through the dining room and kitchen to the laundry, where he began the process of unloading the duffel bags and counting and inspecting the packages one by one. Each individual one-kilo packet had a marking on the tape [to identify separate owners] and the bags were stacked neatly, separated into piles according to their markings... Rafa was carrying a spiral notebook and he noted the number and code of each package. Then George Bergin made his count. He represented the pilots. He confirmed Rafa's count. This was an on-the-job training exercise, and Rafa handed me his notebook. On a clean page he had me count and note the codes of the bags of coke. Finally, since Chava was responsible for the stash house, she too counted the bags and noted the number and codes. She signed for delivery of them. Rafa co-signed with her. When it was determined that all of us had arrived at the same count we went on to

the next phase of the operation. After they had been sorted and counted, all of us pitched in and moved the bags from the laundry to the empty rear bedroom with its one small window. There we stacked them on the floor and in the closet according to their markings. Despite the heavy plastic wrapping, you couldn't miss the hospital smell of ether and acetone. To combat the chemical stink generated by 440 pounds of pure cocaine, Chava place several bottles of vinegar in the corners of the room. Now the stash was complete and ready for delivery (Mermelstein, 1990, pp. 58-59).

The routine described by Mermelstein contains several procedures that interlock behaviors among multiple participants by matching their individual actions to ongoing stimuli. This performance program is diagrammed in Figure 4-3 (see below).

Responding to orders from Rafa, two drivers (DD) deliver cocaine to the stash house and unload the vehicle. Rafa (R) reacts to the visual cue of several cocaine-filled duffel bags lying on the laundry room floor by opening the bags, inspecting, sorting and counting each kilogram package of cocaine. Rafa's action provides a stimulus for Bergin (B) to re-count the packages and confirm Rafa's tally. Bergin's action provides a stimulus for Mermelstein (M) to conduct his count, which in turn causes Chava (C) to make her count, record the packages, and sign for the delivery. In this manner the action-stimulus-reaction sequence continues among the six interlocked participants until the inventory routine is complete and Rafa is ready to begin the delivery performance program.

#### Routine Failure

Rules, practices, procedures and performance programs are critical to the success of trafficking enterprises. Operating as they do in hostile environments, trafficking groups must carry out their activities with speed and precision. This requires coordinated action that effective routines provide. However, Colombian trafficking organizations are not sleek, precisely calibrated operations that rarely breakdown. In spite of the best efforts of leaders and managers, practices and procedures do not always produce the



intended behavior. In most organizations, rules are broken, procedures disregarded, and performance programs poorly executed.

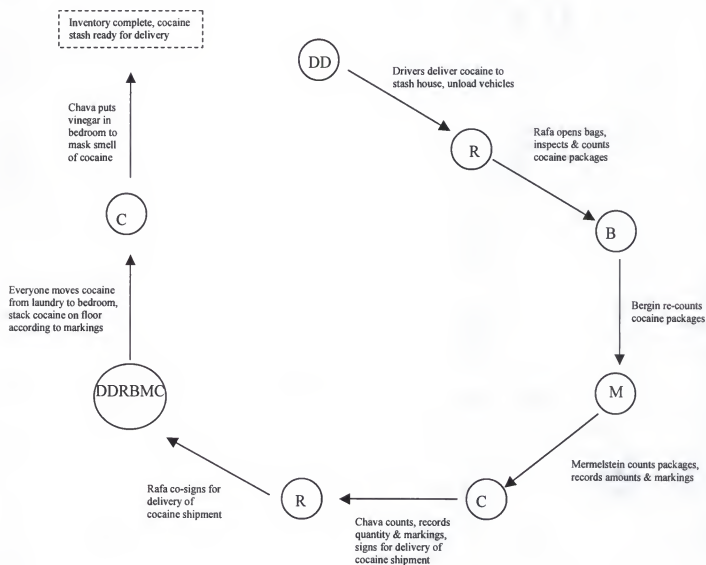


Figure 4-3 Stash House Inventory Routine

Trafficking routines fail for a variety of reasons. They may be poorly designed. A practice or procedure intended to reduce risk from law enforcement may expose the enterprise to a greater threat from illicit competitors, such as well-armed guerrillas and paramilitaries. Some procedures lead to frequent communications breakdowns. The use

of code words and aliases to communicate details of complex transactions produces inevitable misunderstandings among participants. However, many procedures fail not due to poor design, but rather because the participants that execute them are ill-prepared, inept, and dishonest. As we shall see in the next section, participants represent a source of great uncertainty for trafficking enterprises and it is not always possible for leaders and managers to control their behavior (Emil, 2000; Mastrofski & Potter, 1987; Néstor, 2000).

### Participants in Colombian Trafficking Enterprises

Trafficking enterprises pursue their tasks through people. Participants process drugs, weigh drugs, collect drugs, package drugs, hide drugs, transport drugs, unload drugs, count drugs, store drugs, distribute drugs, gather drug proceeds, launder drug proceeds, and perform a host of other drug-related tasks. Participants make decisions, plan strategy, devise tactics, allocate resources, and communicate with other members. Due to the illicit nature of their activities and the corresponding need for secrecy, most Colombian trafficking organizations do not formalize the work-related responsibilities and rewards of their members in documents. On occasion, participants may contribute to a criminal conspiracy without recognizing themselves as members of a specific group or knowing that they are performing an illegal act.<sup>14</sup> In such circumstances, the boundaries of the criminal enterprise become blurred and the identification of participants problematic.

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<sup>14</sup> There have been numerous instances over the years where unsuspecting individuals have unknowingly acted as couriers in the drug trade, transporting small quantities of drugs from Colombia to consumer countries. These mules are deceived through a variety of ruses into carrying luggage or other items, such as local handicrafts, that contain small quantities of cocaine or heroin. When apprehended by law enforcement authorities, they are frequently arrested, tried, and found guilty of participating in trafficking conspiracies. See Molano (1997) and Sabbag (1990) for examples. I am not arguing that all mules fall into this category. Indeed, interview and secondary source data gathered in this research suggest that many Colombian mules are aware of the psychoactive nature of their contraband.

People belong to trafficking enterprises not by virtue of signing a contract of employment, but by identifying themselves as participants with specific roles, and contributing to the activities of the group through their work-related tasks. Other participants and leaders and inter-subjectively validate the individual's identification by accepting his or her claim to membership. Claims may be based on kinship or friendship ties, or, in more formally organized enterprises, the knowledge and skills an individual brings to the group. Whatever the justification, the individual generally recognizes him or herself as part of a larger "we." As "Freckles," an informant interviewed by Darío Betancourt, points out, "I work for a mafioso as a cooker [cocaine processor]; we are a group of four people all well-known, generally family members or old friends" (Betancourt, 1998, p. 159, author's translation). A former participant interviewed for this research describes his importation and distribution group in the following terms:

We had like thirty-five to forty members and yes, of course, we all identified ourselves as members. We all had our part, some supervised the merchandise, others the distribution, others the money (Homero 2000, author's translation).

Both these informants, who worked for separate organizations involved in different phases of the Colombian narcotics industry, identify themselves as part of a larger collective. Moreover, what Homero explicitly recognizes, Freckles clearly implies: group identification is closely tied to the role performed by each participant. Other participants in the Colombian narcotics industry have also identified themselves as such in terms of the roles they enacted for their organizations (Emil, 2000; Johnson, 1993; Mermelstein, 1990; Pallomari, 1997, V. 36; "Mr. Rodriguez," 1997; "Statement of Witness," 1989; Valdés, 2000).

### Participants as a Source of Risk in Trafficking Enterprises

Participants threaten the integrity of trafficking organizations in a variety of ways. One source of vulnerability stems from the cognitive, psychological and physical limitations facing all, even honest and well-intentioned, participants. Trafficking in illegal drugs is stressful, and some participants do not perform well under pressure. Press reports and testimonial accounts relate numerous incidents of physically exhausted or emotionally distraught drug couriers whose "strange" behavior attracts the suspicion of police officials. In his autobiography, Jorge Valdés recalls meeting a courier at the San Francisco airport who had just transported three kilos of cocaine across the U.S. The courier was so nervous that he refused to claim his drug-laden luggage from the baggage claim. Valdés finally grabbed the bag and escorted his mule to a hotel, whereupon the latter admitted that he was not suited for this type of work (Molano, 1997; Otis, 2000; Valdés, 1999, pp. 62-63).

Other participants may perform satisfactorily under pressure but exercise poor judgment in their professional or personal matters. Hedonistic lifestyles create problems for the enterprise when participants attract unnecessary attention through conspicuous consumption, or commit errors in judgment while under the influence of drugs. Poor judgment is not the exclusive preserve of the intoxicated. Laziness, shortsightedness, and inclement weather may cause participants to commit such egregious errors as conducting business related telephone calls from their home residence or repeatedly using the same pay phone to discuss transactions (Derian, 1999; Thompson, 2000).

Beyond nerves and stupidity, participants present a potential threat to trafficking enterprises whenever their individual interests run counter to those of their employers,

which is quite often. According to a copious body of academic literature on the subject, all principals face the challenge of reconciling their agents' interests with their own (Moe, 1984). However, the clandestine and highly profitable nature of drug trafficking creates numerous situations in which participants (*i.e.* agents) confront strong incentives to disregard their principal's interests in favor of their own. Theft is one common example. Participants in trafficking enterprises have access to large quantities of illicit drugs and money, tempting some to steal from their employers. In many enterprises, the temptation to thief is exacerbated by managerial practices that make monitoring participant behavior more difficult. To minimize their exposure to drug enforcement, many leaders and managers avoid handling the "merchandise." To reduce the amount of potential evidence that can be used against them in legal proceedings, leaders and managers keep written records to a minimum and destroy them as soon as possible. The first practice provides participants with opportunities to pilfer product and proceeds from their employers; the second decreases the likelihood that such theft will be noticed and verified.

However, the greatest threat from participants comes not from stealing but from cooperating with law enforcement authorities. The tension between principals' and agents' interests is never stronger than when government officials apprehend participants. Captured participants face a very real prisoner's dilemma in which the pressure to "defect" (from the principal) can be enormous. Depending on the extent and nature of their involvement in the enterprise, participants face the prospect of lengthy prison terms on narcotics violations and criminal conspiracy charges.<sup>15</sup> Depending on the reliability

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<sup>15</sup> According to the U.S. Bureau of Justice, in 1996—the most recent year for which data were available—the average prison sentence for individuals convicted on drug trafficking charges was 7 years and 5 months

and usefulness of their knowledge, they have the opportunity reduce their sentences by cooperating with prosecutors and police officials. In some cases, they may even be allowed to enter the U.S. Marshal's Witness Security Program and begin life anew somewhere in the U.S. under an assumed identity.<sup>16</sup> Leaders attempt to reduce participants' temptation to defect by providing their legal fees, making subsistence payments to their immediate family members, and reminding participants of the dire consequences facing their loved ones should they cooperate with government officials.

### Turnover in Trafficking Enterprises

Turnover in trafficking enterprises is high. Participants frequently enter and exit these criminal organizations, contributing to their dynamic and fluid character. Sources of turnover include apprehension by law enforcement authorities, voluntary retirement, and involuntary expulsion. Every year Colombian police officials remove thousands of participants through capture and arrest (see Table 4-4). However, many of these "perpetrators" are later released due to insufficient evidence, making the disruption more temporary than police officials would prefer (Garzón Saboyá, 1997, pp. 392-394; Sierra, 2001).

Many participants retire from the business following a period of sustained activity.<sup>17</sup> Reasons for retirement are numerous and vary according to the personalities

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in the federal prison system and 4 years and 7 months in state prison systems. However, these average prison sentence figures include marijuana trafficking offenses, which are considerably less severe than cocaine and heroin trafficking offenses and thereby pull the mean down. In the federal system, drug trafficking alone accounted for 40% of all felony convictions for 1996 and 1998 (Bureau of Justice Statistics, 1996; U.S. Sentencing Commission, 1998).

<sup>16</sup> Both Mermelstein and Guillermo Pallomari, a former chief accountant and assistant to Miguel Rodríguez Orejuela, benefited from this program. See Mermelstein (1990), "Statement of Witness," (1989), and Pallomari (1997).

<sup>17</sup> In order to do so, however, they must be in good standing with the organization, which includes not having any outstanding financial obligations from previous business dealings. A participant's decision to depart is often cleared with his or her immediate supervisor and perhaps the enterprise leader. Participants

Table 4-4 Number of Drug-Related Arrests by  
Colombian National Police, 1974-1998 (even years)<sup>18</sup>

Year	Males arrested for narcotics violations	Females arrested for narcotics violations	Foreigners arrested for narcotics violations
1974	1,065	136	104
1976	740	10	19
1978	500	48	7
1980	334	20	4
1982	1,056	76	7
1984	4,422	802	26
1986	2,974	685	40
1988	4,083	815	31
1990	4,766	1,468	19
1992	5,567	1,151	52
1994	5,789	1,326	106
1996	4,478	1,158	67
1998	15,398	2,799	79

*Note:* Figures are provided for even years only in order to present data that cover a 24-year period into a single table.

*Source:* CNP (2000).

and motivations of participants. Some individuals “burn out” from the high level of stress that accompanies this illegal occupation. Others recoil at the steady progression of criminality that sustained participation brings. Participants that have no qualms about collecting and laundering drug proceeds or guarding a stash house sometimes balk at the prospect of engaging in physical intimidation or violence. Some people tire of the hedonistic lifestyle that prompted their initial participation. Drug addiction, family problems, depression, and a “heavy” conscience influence others to cease their criminal activities. More successful participants may retire because they achieve their personal

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that are under suspicion for whatever reason, or that owe the organization money, find it more difficult, if not impossible, to leave peacefully. In some cases, participants that contain knowledge, skills or experience that is highly valued by the organization receive pressure not to depart. According to Mermelstein, his immediate supervisor threatened him when he tried to retire voluntarily (Mermelstein, 1990, p. 125). However, Valdés, who occupied a position similar to Mermelstein in a separate enterprise, argues that he was able to retire without receiving threats his Colombian partners (Valdés, 1999, p. 219). Former participants interviewed by Fuentes (1998, p. 164), Williams (1989, p. 123), and *Frontline* (“Steve,” 2000) confirm that voluntary withdrawal from the narcotics industry is feasible provided the participant is in good standing with his business associates.

<sup>18</sup> Figures are provided for even years only in order to compress data that cover a twenty-four year period into a single table.

enrichment goals, or receive an opportunity to make money in the legitimate economy.<sup>19</sup> Finally, retirement may be driven by a combination of factors. An unwelcome brush with the law may cause a participant to reconsider his priorities, making him less tolerant of work-related stresses and more open to gainful employment in "dull" but less troublesome legitimate occupations (Fuentes, 1998, p. 164; Mermelstein, 1990; Montoya, 2000; Valdés, 1999).

Another source of turnover in trafficking enterprises is involuntary expulsion. Participants in trafficking groups may be fired for failing to adequately perform their work-related activities or engaging in behavior that puts the enterprise or leaders at risk. Former participants and law enforcement officials interviewed by Fuentes identify instances where participants in Colombian organizations were fired for consuming cocaine or abusing alcohol, exposing themselves to unnecessary risk through their personal activities, continually showing up late for scheduled appointments, and repeatedly getting into troublesome situations. In addition, participants may be dismissed if the enterprise is experiencing difficult times. When trafficking enterprises face intense pressure from drug enforcers, they may downsize their operations and lay off unessential personnel (Emil, 2000; Fuentes, 1998, pp. 165-167, 191; Mermelstein, 1990).

In some circumstances, participants are subject to more drastic sanctions than loss of employment. If a worker is believed to have willingly cooperated with law enforcement authorities, stolen product or proceeds from the entrepreneur, or engaged in reckless behavior that threatens the existence of the enterprise, he or she may be subject to physical intimidation and violence, including assassination. However, acts of physical

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<sup>19</sup> However, greed has a tendency to raise the retirement bar for many, making deliberate withdrawal an elusive option (Fuentes, 1998, p. 164).



violence towards participants are generally a measure of last resort, and used sparingly in most organizations. Debts cannot be recovered from dead customers, and harming participants disrupts business activity and may cause other members to question their loyalty to the enterprise (Castillo, 1996, p. 62; Fuentes 1998, p. 198; Gugliotta & Leen, 1989; Mermelstein, 1990; Pallomari, 1997, V. 37, pp. 6060-6061; Sarmiento & Krauthausen, 1991).

### Promotion in Trafficking Enterprises

Irrespective of the cause of turnover, departing participants must be replaced if the organization is to continue operations. One way of replacing associates is to recruit new ones from outside the organization, which has already been discussed. Another practice is to replace participants by promoting from within the enterprise. Promotion is important because it allows leaders and managers to replace participants with minimal disruption to the enterprise. Moreover, promotion offers a mechanism for exploiting the knowledge and skills of the organization's most competent workers.

Internal promotion is common practice in Colombian trafficking enterprises. Interviews conducted in this research and by Fuentes, as well as court documents, provide numerous examples of participants working their way up the enterprise, assuming positions of greater responsibility as they demonstrate their professional competence and loyalty to leaders and managers.<sup>20</sup> The stimulus for promotion often comes from effective law enforcement. As members are arrested and incarcerated, or indicted and forced to flee the U.S., they must be replaced, providing opportunities for the remaining associates, particularly those that have caught leaders' attention through

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<sup>20</sup> The Third Superseding Indictment in *U.S. v. Miguel Rodríguez-Orejuela et. al.*, Case No. 93-470-CR-WMH, lists several examples of members of the Rodríguez Orejuela enterprise being promoted. Also, see Mermelstein (1990, p. 222).

aptitude and hard work. Homero describes how he benefited from turnover in his trafficking group:

Homero: Initially, I was a mule, but after I traveled to the U.S... they needed someone they could trust to stay here to deliver [the mules] to others, and that was how I became involved in that aspect of the business.

Author: So it functioned as a form of promotion?

Homero: Yes, of course, because what happens is that you go and return a couple of times, and you are a competent person, so possibly in the U.S. or whatever country, they lose someone... for whatever reason, he goes to prison or he doesn't want to work anymore, so they need someone of confidence in order to secure the distribution, that the production line goes to the consumers. So I began to receive mules that arrived first in Miami, then I went to New York, to obtain mules. Then I was contracting cars, etc. (Homero, 2000, author's translation).

When turnover is high, promotion opportunities are numerous, and competent associates may find themselves rising rapidly through the managerial ranks. According to Fuentes, a member of the core organization led by Helmer Herrera quickly rose from "errand boy" to "section leader in charge of all collection, counting, and packaging of drug monies generated by the M7 cell" (Fuentes, 1998, pp. 87-88). In some enterprises, imprisonment can lead to promotion for the convicted associate, provided the person serves the sentence without cooperating with the authorities. José Patiño, a member of the Rodríguez Orejuela organization, was arrested in New York in 1979 for trafficking activities. While all of his co-defendants fled the jurisdiction, Patiño dutifully served his sentence and was promoted upon his release, eventually becoming the head of the organization's European operations (Minority Staff Statement, 1989, pp. 125-126).

Promotion is complicated when leaders are the ones to be replaced. Who succeeds the entrepreneur? In small, clan-based trafficking enterprises, where authority is centered on a single figure, the leader may be irreplaceable. In these groups, removal

of the family boss may signal the termination of the enterprise itself. However, larger, more formally organized groups, such as core organizations and even medium-sized enterprises can survive a limited amount of executive turnover. When leaders of these organizations are incarcerated they will often turn over the day-to-day management of trafficking operations to trusted subordinates, such as family members or criminal associates.<sup>21</sup>

In some enterprises the act of "turning over" operations may be as simple as supplying the new leader with the necessary contact information, and vouching for his credibility with suppliers and wholesale customers. This service may be rendered by the original entrepreneur in exchange for a fee or a cut of the profits of the continuing conspiracy. Frequently, the replacement is a long-time confidant that has worked his or her way up the organization. The head of an elite drug enforcement unit in the detective's branch of the CNP explains:

So the ones known by their aliases as Chupeta and Cuchilla, they are in the prison and they are not trafficking, but who is trafficking for them [are]... the people that remain on the outside. They are the ones that rent [the routes]. [Chupeta and Cuchilla] ceded their routes to these people that were their men of confidence and they told them, "Take your route, I rent it to you, I have nothing to do with this." They turn over the routes and just receive some dividends for renting them. So then, the ones that become stronger are the ones that were from the lower levels [of the organization] and now they are owners of those routes (Molano, 2000, author's translation).<sup>22</sup>

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<sup>21</sup> Following his imprisonment, Miguel Rodríguez Orejuela ceded control of his large criminal operations to his son William. When Colombian authorities arrested Ivan Urdinola Grajales in 1992, he reportedly relinquished control of his trafficking enterprise to his brother and criminal associate, Julio Fabio. Three years later, Julio Fabio himself surrendered to Colombian officials, whereupon day-to-day management of the organization passed to Ivan's brothers in law, Orlando and Arcangel Henao Montoya, (DEA, 1994, p. 4; Farah, 1997; Farah & Moore, 1997; Lyons, 1997).

<sup>22</sup> A Colombian government prosecutor with experience in narcotics investigations makes a similar point: "... every time that they capture a group of narcotics traffickers... naturally, they never catch all of them. There are people that sell the information, people that know whom are the contacts outside the country and here inside..." (Morales, 2000, author's translation).

### Technologies in Colombian Trafficking Enterprises

Colombian trafficking enterprises draw on material and symbolic resources to perform work. The core technologies of trafficking organizations vary according to the product or service provided, as well as the amount and frequency of their transactions. An enterprise that processes small quantities of coca paste into cocaine hydrochloride requires substantially fewer material and symbolic inputs than an organization that produces, transports, and distributes several tons of cocaine each month. Yet, even the smallest operation will contain a core technology composed of the inputs necessary to perform work. By way of illustrating the technologies involved in these illicit activities, the following paragraphs discuss the cocaine processing, communications, and transportations practices of Colombian trafficking enterprises.

Enterprises that specialize in processing cocaine hydrochloride draw on a variety of technological inputs. A laboratory or other physical installation provides the site to process the illicit commodity. Chemical solvents, such as potassium permanganate, ether, acetone, and hydrochloric acid, extract alkaloids and remove impurities from coca paste and cocaine base. Water dilutes various solvents. Metal recipients, including fifty-five gallon drums, hold the mixture of cocaine product, solvents, and water during cooking. Linen sheeting and tables are used to filter the post-cooking substances. Paper sheets and metal trays are used to dry cocaine hydrochloride. Scales are used for weighing finished cocaine, and plastic bags for packaging it. Cocaine processing also requires at least one technician or "chemist" with knowledge of the formulas involved in each processing step and workers to provide assistance (Anonymous, 1991; DEA, 1993b,

p. 7; Gugliotta & Leen, 1989, pp. 121-122; Mermelstein, 1990, pp. 36-38; Valdés, 1999, p. 88).

Trafficking enterprises also use a variety of communications and transportation technologies to conduct their illicit activities. Traffickers use standard telephones, facsimile machines, beepers, cellular phones, and satellite phones to communicate information. Some enterprises have recently exploited computer mediated communication technologies for the same purpose. Participants in one enterprise disrupted by government authorities in 1999 communicated through e-mail and online chat rooms protected by firewalls. This organization also used cellular phone cloning technology to steal phone numbers assigned to legitimate customers, and encryption technology to cipher sensitive information regarding narcotics shipments and sales (Farah, 1999b; Johnson, 2000; ONDCP, 2001, p. 90). A number of drug enforcement agents interviewed in this research acknowledge that these developments have made it increasingly difficult for them to gather intelligence through such traditional sources as wiretaps placed on the telephone lines of suspected traffickers (Aero, 2000; Brandy, 2000; Crank, 2000; Smith, 2000a; Thompson, 2000).

Trafficking enterprises use numerous aviation, maritime and surveillance technologies to perform work. The airplane has been a favorite tool of contraband smugglers since the days of Prohibition, but contemporary transportation rings often use more recent aviation technology. In the 1970s, a number of smuggling rings transported marijuana from Colombia to the U.S. using twin-engine propeller planes such as the Navajo Panther and Cessna 210. The following decade airborne numerous smugglers turned to the more lucrative cocaine traffic, upgrading their aircraft to Gulfstream Aero

Commanders, Beechcraft King Air 300s, and Cessna 400s. Pilots often modified their planes with technology that allowed them to fly longer and monitor government anti-drug surveillance. Rubber fuel bladders allowed for flights from Colombia to travel as far North as Pennsylvania without refueling. Radar detectors, radio scanners and scramblers, and night vision goggles provided the means to monitor government tracking planes. Some transportation rings maintained listening posts in the U.S. complete with CB, VHF, single side band, and marine radios to maintain communication with ongoing flights and Bearcat scanners and police radios to keep an eye on law enforcement activity in the landing area. In the 1990s, several core enterprises acquired large cargo aircraft, such as Convair 580s and Boeing 727s, to transport multi-ton cocaine shipments into Mexico and Canada (DEA, 1993b, p. 17; Pallomari, 1997).

Colombian trafficking enterprises use a variety of seafaring vessels to transport cocaine, heroin and marijuana through the Caribbean, including go-fast motor boats, sport fisherman's crafts, yachts, commercial fishing boats, and freighters. Smaller vessels are frequently modified with secret hiding compartments, extra gasoline tanks, and large outboard engines. In the early 1990s, a number of enterprises began using "low profile vessels" to transport cocaine between Colombia and Puerto Rico. These vessels are colored dark gray to blend in with the sea and ride only one to two feet above sea water, making detection by radar extremely difficult. They measure forty-feet in length, and can transport up to one metric ton of cocaine at a time (DEA, 1993a, p. 16; Dye, 1998, pp. 261-262). Around the same time, DEA intelligence officials reported that some core organizations were experimenting with semi-submersible vessels used to transport

several hundred pounds of cocaine between Colombia and Puerto Rico.<sup>23</sup> These vessels do not operate completely under water, but skim along the surface of the sea. As with low profile vessels, the semi-submersibles are virtually undetectable by radar (Farah & Kovaleski, 1998; DEA, 1994, p. 7).<sup>24</sup> In September 2000, Colombian authorities discovered a partially finished submarine for transporting narcotics outside of Bogotá. If completed, the 100-foot vessel, based on Russian submarine technology, would have included a computer navigation system and engine room, and been capable of transporting up to ten metric tons of cocaine to the U.S. (BINLEA, 2001; CNN, 2000; *El Tiempo*, 2000d; CM&, 2000).

#### Practical vs. Scientific Knowledge

In addition to material technology, Colombian trafficking enterprises draw on knowledge-based expertise in conducting their illicit activities. In analyzing the symbolic inputs used by these organizations, it is useful to distinguish between practical and scientific knowledge. Practical knowledge refers to general information and understanding necessary to carry out every day activities, such as talking on a telephone or driving a car. Scientific knowledge refers to technical or symbolic erudition regarding a particular phenomenon, such as the genetic composition of human chromosomes or machinery production in 19<sup>th</sup> Century England. Practical expertise is obtained through on-the-job training and the accumulation of direct experience. Scientific expertise is acquired over many years, generally through formal educational training.

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<sup>23</sup> As noted in Chapter 2, Cervantes reports that some traffickers were using semi-submersibles to transport marijuana in the late 1970s (Cervantes, 1980, pp. 80-81).

<sup>24</sup> One DEA intelligence analyst interviewed for this research points out that semi-submersible vessels are not widely among Colombian narcotics organizations (Evans, 1999).

Many trafficking activities, including drug processing, transportation, and distribution, require a fair amount of practical knowledge on the part of participants. A worker in a distribution cell must be able to communicate with his colleagues using simple code words, drive motor vehicles to specified locations, inspect and count packages containing either drugs or money, and record notations in notebooks or other forms of organizational memory. A drug chemist must be able to mix different chemicals in varying quantities, cook them for a specified period, and filter and desiccate the resulting solution. A cell manager must be able to supervise the criminal activities of numerous subordinates, maintain frequent contact with the home office using a variety of telecommunications technologies, and plan and implement distribution and collection programs.

The amount of scientific knowledge required to carry out these activities is minimal. Driving a car, communicating in code, writing simple notations are practical activities that require a certain degree of general knowledge but not extensive scientific training. The symbolic expertise involved in drug processing is fairly rudimentary and can be acquired without any formal training in chemistry. Processing technicians need only memorize a multi-step recipe for mixing, cooking, filtering, and drying various substances. They do not have to understand why hydrochloric acid causes cocaine base to crystallize into cocaine hydrochloride, only that it does. Recipes and procedures capture this practical knowledge, and together they constitute a straightforward performance program. While the technicians that carry out this process frequently possess considerable knowledge about their craft, they do not require a great deal of



scientific training.<sup>25</sup> Even more cerebral activities, such as planning drug shipments and coordinating the activities of numerous participants, do not require considerable scientific knowledge. While it may be desirable to have cell managers that possess some formal training in business administration, just as it may be desirable to have drug processors with formal training in chemistry, it is not essential. More important than formal educational training is a sufficient degree of practical knowledge and common sense.

The lack of scientific knowledge required in most trafficking activities has significant implications for the development of the illicit drug trade in Colombia and elsewhere. Because trafficking knowledge is largely practical rather than scientific, relevant information can be disseminated widely, even within so-called “developing” countries that lack strong educational systems. In Colombia, the information involved in drug trafficking has spread throughout the country over the last several decades. This is one reason why new and re-organized enterprises are quick to step into the trafficking void left in the wake of drug enforcement operations. With hundreds, perhaps thousands, of individuals that possess a working knowledge of drug trafficking still “on the streets” even the most successful interventions by law enforcers are likely to cause, at best, a temporary disruption of trafficking patterns. Individuals with the knowledge, resources, and desire to participate in these criminal activities will create organizational forms that allow them to do so. In the process, the practical knowledge involved in drug trafficking spreads further still, as new entrants that lack previous experience in these activities are recruited into trafficking enterprises. Ancillary services that require more scientific

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<sup>25</sup> As one respondent who has conducted extensive research on cocaine processing in Colombia recalls, “I had a chemist once who told me, ‘I do not know how to read and write but I am damn good chemist,’ [respondent laughs]. Actually, he said, ‘I only have [a] 3<sup>rd</sup> grade education but [I’m] a chemist’” (Uribe Ramírez, 2000).

knowledge, such as legal representation and certain forms of money laundering, can be sub-contracted to independent firms on a needs-only basis.

### Conclusion

The illicit drug industry in Colombia is composed of hundreds of collective forms that engage in a variety of production, transportation, distribution, and money laundering activities. Many of these enterprises contain the constitutive elements of social organizations. They are target-oriented entities that provide specific products, from precursor chemicals to fully refined narcotics, to achieve satisfactory profits and other benefits. They draw on task environments for material and symbolic resources, including technology, capital, and participants. They interact with a variety of suppliers, customers, and competitors that together form a hostile and dynamic environment. They contain structures that guide participants' behavior, including flat decision-making hierarchies, compartmentalized cells, and routines that minimize organizational vulnerabilities. They contain participants that make valuable contributions in return for inducements. While turnover is high in many enterprises, an abundant labor supply and promotion procedures mitigate its disruptive impact. Finally, trafficking enterprises exploit a variety of material and symbolic technologies when conducting their criminal activities. Many organizations have demonstrated the ability to exploit the latest advances in material technologies to improve the effectiveness, if not necessarily the efficiency, of their operations. The practical, as opposed to the scientific, orientation of drug trafficking ensures that the requisite knowledge is easily and widely diffused among participants, complicating law enforcement strategies to dismantle the drug trade by targeting a few major narcotics organizations.

While this chapter has deepened our understanding of the organizational forms that coordinate the Colombian drug industry, my task is far from complete. If trafficking enterprises constitute social collectives, it remains to be seen whether and to what extent they learn as organizations. Do participants acting on behalf of these criminal enterprises receive, interpret, and apply information by changing the organizational routines that structure their behavior? In the next chapter, I attempt to answer this difficult question.

## CHAPTER 5

### ORGANIZATIONAL LEARNING BY COLOMBIAN TRAFFICKING ENTERPRISES

During the past several decades an illegal industry has emerged in Colombia composed of hundreds of criminal firms that produce, transport, and distribute psychoactive drugs. In spite of government efforts to dismantle Colombian trafficking enterprises over the last two decades, today the country's drug trade produces more cocaine and heroin than ever before. Having described the historical evolution of this industry and the collective forms that constitute it in previous chapters, my purpose here is to determine whether trafficking enterprises learn from knowledge and experience. In doing so, I focus on their repeated interactions with that most significant of external foes, government drug enforcement agencies.

This chapter proceeds as follows. I begin by re-stating the primary query of the study. Next, I summarize respondents' answers to the relevant survey questions. I follow this with an in-depth analysis of the learning process experienced by Colombian trafficking enterprises. I arrange this discussion into sections corresponding to the process-oriented notion of organizational learning used in this study. I then examine several problems and pitfalls confronting trafficking enterprises as they seek to learn from knowledge and experience. Finally, I conclude with a brief review of the chapter's principal findings.

### Re-Statement of Organizational Learning Proposition

Organizations learn when participants acquire, interpret and apply knowledge and experience to rules, practices, and procedures that guide collective behavior.

Organizations obtain information through their own trial and error experience and search.

Participants record knowledge and experience in organizational memories, including manuals, databases, financial accounts, correspondence and computers. Organizations construct meaning out of knowledge and experience through sensemaking, which refers to the process by which participants develop inter-subjective understandings through meetings, conversations, stories and myths. Participants enact information through practices, procedures and performance programs that coordinate their behavior. When an organization alters a practice or procedure as a result of acquiring and interpreting information, it is has engaged in the process of organizational "learning."<sup>1</sup>

Applied to the primary unit of analysis in this study, these ideas yield the following proposition:

If participants in Colombian trafficking enterprises gather, interpret, and apply information to collective behavior by changing existing routines or creating new ones, then organizational learning has occurred.

For learning to explain organizational behavior, as opposed to alternative factors such as power and environmental selection, participants must alter routines *as a result of* acquiring and interpreting knowledge and experience.

### A First Cut: Quantifying Interview Results

Do Colombian trafficking organizations learn from knowledge and experience? I posed this question to several dozen respondents interviewed for this research. As a

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<sup>1</sup> Unlike some students of organizational behavior, I do not make a strong distinction between learning and adaptation. Instead, as discussed in Chapter 2, I distinguish between tactical and strategic learning. In this study, the terms adaptation and learning are used interchangeably.

preliminary assessment of the primary research proposition, I begin by classifying the negative and affirmative responses to this question.

The interview sample includes seventy-six Colombian and U.S. respondents. At the time of their interviews, sixty-seven percent (N=51) of the respondents were government officials. Sixty percent of these officials (N=31) worked in drug enforcement agencies, such as the Colombian National Police (CNP) and the Drug Enforcement Administration (DEA). In addition, I interviewed fourteen academic researchers, six professional journalists, and five former participants. The former participants were involved in different trafficking enterprises and activities, including:

- Coca farmer/coca paste processor from southern Colombia (Putumayo province) (Carlos);
- Independent (*i.e.* non-core organization affiliated) broker of marijuana and cocaine (Nestor);
- Member of an independent, U.S.-based polydrug distribution ring (Homero);
- Member of a core-affiliated international transportation cell (Emil); and
- Head of U.S. operations for a core affiliated narcotics organization (Jorge Valdés);<sup>2</sup>

Table 5-1 Professional Affiliation & Nationality of Respondents

	Government official*	Academic researcher	Professional journalist	Former direct participant
Colombian	26	11	4	4
United States	24	3	2	1

Note: One government official worked for the United Nations.

In the course of conducting interviews, I asked seventy respondents if Colombian trafficking enterprises adjust their behavior in response to experience or information.<sup>3</sup>

Ninety-six percent of these respondents (N=67) replied in the affirmative. Forty-seven

<sup>2</sup> With the exception of Jorge Valdés, pseudonyms are used throughout this study to protect the identities of these respondents. Valdés, who has written an autobiography of his former criminal career (Valdés, 1999), granted permission to use his real name.

<sup>3</sup> In six interviews, four with Colombian government officials and two with Colombian academics, the topic of organizational learning by narcotics enterprises was not addressed. For a complete list of all the respondents, see Appendix A.

government officials, including twenty-nine drug enforcers, argued that Colombian trafficking enterprises learn from knowledge and experience, as did all six journalists. In addition, all five of the former participants argued that trafficking enterprises adjust their practices in response to feedback, and provided specific examples, drawing on their own experiences. These examples are analyzed throughout the chapter.

Three Colombian scholars disconfirmed the learning proposition. One suggested that many traffickers do not learn from knowledge and experience, and that drug enforcers frequently apprehend them (López Restrepo, 2000).<sup>4</sup> Another argued that participants work in trafficking organizations for a short period and consequently there is no accumulation of knowledge and experience (Parra, 2000). A third respondent maintained that the Colombian state is so corrupt and inept that there is no need for adaptive behavior on the part of trafficking organizations (Vargas Meza, 2000). However, six Colombian academics and three U.S. scholars affirmed the research proposition, arguing that trafficking enterprises adjust their behavior in response to information and experience.

The vast majority of respondents indicated agreement with the notion of organizational learning by Colombian trafficking enterprises. However, the results presented in Table 5-2 represent only a first step towards validating the learning proposition. At this stage of the inquiry it is important to remain cautious.<sup>5</sup> To determine

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<sup>4</sup> Since his interview, this respondent has altered his position. He now argues that Colombian narcotics organizations learn from experience and has drawn on my work in his own research. See López Restrepo & Camacho Guizado (2001). However, in this study I remain true to his original response.

<sup>5</sup> For one thing, the overwhelming number of affirmative responses may be explained, in part, by the sample's bias towards government drug enforcement officials. This bias was intentional and reflects a methodological strategy to interview people whose professional activities put them in close contact with Colombian trafficking enterprises. However, the common professional background of so many respondents may help explain the overwhelming number of affirmative responses. Perhaps law enforcement officials are more likely than other respondents, say Colombian academics, to affirm

whether trafficking organizations learn, it is more useful to study the process by which participants in these enterprises gather, interpret, and apply knowledge and experience to their activities. This requires a detailed examination of the primary and secondary-source data gathered in this research. The structure of the following analysis corresponds to the process-oriented definition of organizational learning used in this study. Trafficking enterprises are analyzed according to their ability to acquire knowledge and experience, document and interpret this information through organizational memories, and apply information by changing practices and procedures that guide their illicit activities.

Table 5-2 Do Colombian Trafficking Organizations Learn?  
Results from Interviews<sup>6</sup>

Type of Respondent	Affirmative	Negative	Not Discussed
Colombian government officials	22	0	4
U.S. government officials	24	0	0
IGO official	1	0	0
Colombian journalists	4	0	0
U.S. journalists	2	0	0
Colombian scholars	6	3	2
U.S. scholars	3	0	0
Former participants	5	0	0
TOTAL	67	3	6

adaptation by narcotics organizations because it validates the difficulties they face in their work. However, it is also true that the majority of respondents in all of the professional categories, including Colombian academics, stated that narcotics traffickers adjust their behavior to feedback. It is particularly encouraging that all five former participants, the respondents with direct experience in the Colombian drug trade, responded affirmatively to the questions on learning and adaptation.

<sup>6</sup> In the English language interviews (N=34), the primary learning question was as follows: Do drug trafficking enterprises adjust their behavior in response to past experience or new information? In the Spanish language interviews (N=42), the questions were altered slightly: ¿Las organizaciones criminales colombianas han aprendido de la política estatal? ¿Es decir, suelen cambiar sus actividades ilícitas como reacción a la política estatal? ¿Se cambian sus actividades ilícitas como reacción a lo que están haciendo sus competidores ilícitos (es decir otros grupos de narcotraficantes, guerrillas, paras)? ¿Estas organizaciones son capaces de aprenderse a los acontecimientos del pasado? For a complete list of the questions asked during the English and Spanish language interviews, see Appendix.



### Acquiring Knowledge and Experience

Colombian trafficking organizations obtain information through trial and error experience and search. Sources of knowledge include their own participants, outside consultants, other trafficking enterprises, even government officials. Relevant information includes know-how, techniques and practices regarding the production, transportation and distribution of narcotics, money laundering, and ancillary activities.

Trafficking enterprises seek information to resolve problematic situations. Following an unforeseen event, such as the interdiction of a drug shipment, participants are assigned to gather information about the mismatch from press clippings, public documents, and other participants that experienced first-hand knowledge of the event. Organization leaders and managers use the information to determine how the mismatch occurred and assess culpability among participants. However, a mismatch is not necessary to stimulate search. Trafficking organizations frequently seek knowledge regarding technological innovations they can use to stay “one step ahead” of law enforcement (Francis, 2000; Mermelstein, 1990, p. 118; Olson, 2000, p. 59; Rice, 1989, p. 148).

Colombian trafficking enterprises have developed a variety of practices for gathering information about their trade and socializing members to organizational practices and procedures. Participants are sent on fact-finding missions to learn about practices and procedures used in other parts of the enterprise or the narcotics industry in general. As he began his formal association with a core enterprise, Emil was sent to Miami to acquire information regarding cell management and maritime shipments.

Subsequently, he used this knowledge in conducting various activities on behalf of the organization. The Rodríguez Orejuela brothers sent participants to various parts of their transnational trafficking operations to observe how different activities were carried out. One participant was sent to Venezuela to “inspect” the process by which the enterprise hid cocaine inside concrete posts and cornerstones and exported them to South Florida. Another traveled to Los Angeles to show a cell manager and other participants “how to extract the cocaine packages concealed in wood boards.” A third went to Guatemala to receive information about code words and containers for hiding cocaine (Emil, 2000; Reyes, 1999, pp. 180-181; Third Superseding Indictment, [no date], pp. 9, 17-18).

Another standard practice is to gather information about different ways of smuggling psychoactive drugs, laundering illicit profits, and manipulating legal systems. Many trafficking organizations expend considerable resources to gather such knowledge. Often, they draw on the knowledge and skills of participants to develop innovations, even assigning participants the task of developing new smuggling routes and methods. When asked how his trafficking group developed the innovation of hiding cocaine shipments inside diesel engines, which he claimed was an effective ruse against police “sniffer” dogs, Jorge Valdés recalled that the idea came from a chemist or law enforcement officer working on behalf of the enterprise. As the operation grew, Valdés and his Colombian partners hired more participants, adding to the organization’s knowledge base (Valdés, 2000). To incorporate specialized, in some cases scientific, knowledge regarding essential activities, trafficking enterprises hire engineers, chemists, lawyers, and former drug enforcers and military officials (Arreguin, 2000; Brandy, 2000; Francis, 2000; Oporto, 2000; Thompson, 2000).

When knowledge is not available in-house, traffickers draw on the expertise of outside consultants that, as Peter Lupsha notes, “beat a path to their door with new ideas, technologies, techniques, and investment opportunities” (Lupsha, 1996, p. 34).

According to a DEA intelligence analyst, the idea for semi-submersible vessels that glide along the surface of the Caribbean Sea (see Chapter 4) came from “independent folks” hoping to profit from this lucrative commerce by selling their innovation to established smuggling groups. Russian and U.S. engineers and naval experts were reportedly sub-contracted by Northern Cauca Valley enterprises to construct the submarine discovered by Colombian authorities in September 2000. When a number of cocaine enterprises decided to diversify into the heroin market in the 1980s, they hired refining specialists from Mexico and the Far East to acquire information about processing opium latex into heroin. More recently, at least one Colombian enterprise hired trained chemists to teach their participants to process potassium permanganate, an essential precursor chemical for refining cocaine base (*Cambio*, 2000, p. 36; Evans, 1999; Farah, 1997; Griffith, 2000; Restrepo, 2000; *Semana*, 2000b; Serrano Cadena, 1999, pp. 50-51).

#### Counter-Surveillance Activities

In reflection of the constant threat they face from drug enforcers, Colombian trafficking organizations direct many of their information gathering activities towards government counter-narcotics efforts. Trafficking enterprises gather intelligence about U.S. and Colombian law enforcement policies and programs from a variety of human, electronic, and documentary sources, including government officials and records, news reports, advertisements in magazines, and paid informants. In the 1980s, numerous organized crime groups regularly exploited the Freedom of Information Act (FOIA) to

obtain access to vital tactical intelligence, including the identities of confidential government informants. Testifying before the U.S. Senate Subcommittee on Security and Terrorism, DEA Administrator Francis Mullen argued that over eighty percent of the FOIA requests received by his agency were from criminals, or their associates, "trying to learn how they ended up in prison and who was involved in putting them there" (Mullen, 1984, p. 26). In a separate Congressional hearing, he claimed that traffickers also collect information on how to avoid detection by the DEA from paid advertisements in certain narcotics-oriented and motorcycle publications (Mullen, 1983, p. 27).

Drug enforcers themselves provide useful intelligence to trafficking groups. In their quest for budget allocations and organizational legitimacy, law enforcement agencies such as the DEA and Customs often promote their latest activities in the war on drugs. However, as Néstor points out, the publicity causes traffickers to change their operations:

They [law enforcement authorities] start talking, publicizing their activities. You find out they had some boat in Miami. So you ask yourself what the hell do they want with this boat? Then the smugglers know something is going on, so you switch modes. So when the government came out in the media saying, "We got helicopters, we're doing this and this," then the smugglers would say, "Okay, let's switch the operations" (Néstor, 2000).

Many enterprises invest considerable financial and human resources in developing sophisticated counter-intelligence operations. During the 1980s, several cocaine transportation rings established listening posts in Miami and other coastal areas to monitor the radio frequencies of Customs interdiction flights and local narcotics agents. Some groups also stationed observers at federal facilities in South Florida, including the Homestead Air Force Base and Boca Chica Naval Air Station, in order to monitor interdiction flights. Trafficking organizations acquired lists of the radio

frequencies used by the DEA, FBI and other enforcement agencies from radio shops and public documents. Some enterprises even purchased flight schedules for U.S. Customs and Coast Guard planes from corrupt U.S. officials (Dye, 1998, p. 239; Mullen, 1983, pp. 25, 27; Rice 1989, p. 83; Sáenz Rovner, 2000; "Statement of Witness," 1989, p. 10).

In Colombia, core organizations developed sophisticated intelligence networks with the help of active collaborators from a variety of public and private institutions, including numerous law enforcement agencies, national and regional legislatures, prosecution offices, telephone companies, newspapers, taxi cab companies, law firms, hotels, and other service industries. Through these informants, trafficking enterprises acquire valuable information regarding government drug enforcement policies and programs, as well as impending legislation and criminal proceedings.

#### Intelligence Capabilities of Rodríguez Orejuela Organization

The intelligence gathering capabilities of the Rodríguez Orejuela enterprise were particularly impressive. According to the organization's chief accountant, the head of the Regional Prosecutors Office in Cali provided Miguel Rodríguez Orejuela with confidential government reports, including drug enforcement information sharing agreements between the U.S. and Colombian governments. The organization also allegedly bribed dozens of telephone company officials in order to gather information from unsuspecting government officials, including several at the U.S. Embassy in Bogotá. Senator John Kerry, who conducted several numerous Congressional hearings on the international drug trade while serving on the Senate Foreign Relations Committee, claims that the Rodríguez Orejuela enterprise "was even monitoring conversations between the U.S. Drug Enforcement Administration chief in Colombia and senior Justice

prosecutors in Washington” (Farah, 1999a; Kerry, 1997, p. 77; Pallomari, 1997, V. 39, pp. 6312, 6319).

During the 1990s, the Rodríguez Orejuela organization established an elaborate intelligence network in Cali using local cab drivers that provided information regarding suspicious activity, in exchange for receiving cars through interest-free loans and free mechanical assistance. Before such technologies were widely available in Colombia, the taxis were equipped with beepers, communications radios, and cellular telephones to help them carry out their counter-surveillance mission. Back in the U.S., the enterprise hired attorneys to research government regulations regarding wiretaps, and gather information about law enforcement tactics in criminal cases targeting their distribution cells (Derian, 1999; Evans, 1999; Francis, 2000; McNamara, 1999; Kerry, 1997, p. 78; Serrano Cadena, 1999, p. 154).

#### Informal Exchange of Information

The diffusion of knowledge and experience among participants in trafficking enterprises is often fairly informal. Participants meet in informal settings, such as restaurants, bars, and dance clubs, to discuss impending activities, business problems, and recent developments in the industry. Néstor offers an example from his trafficking days, “Yeah, sure we sit down at a restaurant. I tell them what to do. Nothing like a corporate meeting. Sometimes we meet half way from one location to another. Very informal meeting, no set of written instructions (Néstor, 2000). Private social gatherings, including birthday parties, baptisms, and weddings, provide participants additional opportunities for swapping stories and exchanging trade rumors. In this manner, less experienced participants are socialized to the norms and practices of their organization,

the illicit drug industry, and drug enforcement. They draw on this knowledge when carrying out their tasks for the organization (Calderón, 2000; Emil, 2000; Furden, 2000; Johnson, 1993; Mermelstein 1990; Valdés, 1999; Valdés, 2000).

Significantly, this informal exchange of information is not confined to members of the same enterprise. Diffusion of trafficking knowledge often occurs across organizations, but within common networks. Individuals that belong to separate enterprises, yet connected through criminal pursuits and personal contacts may talk and share know-how at parties and other informal settings. Again, Néstor illuminates from his own experience:

You know the smugglers, you know who they are, you may not even work with each other but you got each other's back... In restaurants you might meet up with some guys and you find out how the environment, how the situation is going. This is all useful information (Néstor, 2000).

These contacts are not restricted to participants from the same country, although common nationality provides a cultural bond that increases trust. When it suits their interests, Colombian traffickers exchange information with colleagues from a variety of countries, including the U.S., Mexico, Russia, Italy, and Japan (Reyes Posada, 1999, p. 4; Valdés, 2000; Zabudoff, 1999).

However, due to the potential for law enforcement penetration, many trafficking enterprises seek to limit the informal exchange of information. Emil stresses that participants in his core enterprise were always careful to share knowledge only with the other members of their "circle," even during social gatherings. Fuentes makes a similar point about the Colombian distribution cells he studied. While social contact between members of different enterprises was tolerated, participants understood that they were not to discuss cell activities in open settings (Emil, 2000; Fuentes, 1998, fn. 1, p. 114).

The lack of detailed scientific knowledge involved in drug trafficking (see Chapter 4) has significant implications for the exchange of information among participants in the Colombian narcotics industry. A large amount of the knowledge required to produce, transport, and distribute illegal psychoactive drugs can be acquired rather easily, often without formal scientific training. Participants often learn by doing, watching more experienced others carry out activities and talking with them about their work. Mermelstein acquired much of his trafficking knowledge through practical, “on-the-job training exercises,” in which he observed other participants conduct different drug processing and distribution activities. Emil experienced a similar training process when he traveled to Miami to learn about maritime transportation and cell management (Emil, 2000; Mermelstein, 1990, p. 59).

Over the past several decades, the informal exchange of knowledge and experience among different participants and organizations in the Colombian drug trade has facilitated an illegal tradition of sorts, with the relatively simple know-how involved in drug trafficking becoming increasingly widespread throughout Colombian society (Calderón, 2000; Krauthausen & Sarmiento, 1991, p. 139).<sup>7</sup>

#### Drug Smuggling U: Acquiring Trafficking Knowledge in Prison

In addition to weddings and dance halls, prisons provide an ideal setting for participants from different enterprises to gather and share knowledge and experience regarding drug trafficking. Social commentators and criminologists have long recognized that prisons serve as schools for delinquent behavior, allowing career criminals to acquire knowledge of their trade and establish useful contacts for future

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<sup>7</sup> I am not suggesting that all or even most Colombian citizens are involved in drug trafficking. Rather, my point is that due, in part, to its relatively simple technology, the knowledge contained in the drug trade has become increasingly widespread throughout the country.



endeavors. Citing 19<sup>th</sup> Century studies on the French prison system, Michel Foucault argues, "The prison makes possible, even encourages, the organization of a milieu of delinquents, loyal to one another, hierarchized, ready to aid and abet any future criminal act" (Foucault, 1977, p. 267). More recently, several prominent Colombian scholars discuss the prison system in their country: "It is no secret that the prisons... are schools of crime in which they [inmates] perfect their methods, increase their dangerousness and foster the phenomenon of recidivism" (Leal Buitrago *et al.*, 1999, p. 90, translated by author. Also, see McAndrew, 2000, p. 53).

By housing large numbers of convicted drug felons in the same location where they enjoy close physical proximity to one another, contemporary governments encourage the formation of trafficking networks. Participants in the Colombian drug trade have been known to take advantage of their prison time to acquire information and connections to be exploited following their release from prison. In the early 1970s, a marijuana smuggler by the name of Carlos Lehder was sentenced to several years in the Danbury Correctional Institution, where he befriended another marijuana smuggler named George Jung. This fortuitous pairing led to a productive exchange of knowledge and experience as the two convicts planned future cocaine deals, poring over maps in the prison library and designing smuggling routes from Colombia through the Caribbean (Gugliotta & Leen, 1989, pp. 28-31 *Los Angeles Times*, 1988; Porter, 1993). As Jung later recalled in a *Frontline* interview, his partner also gathered information from other inmates:

... Carlos never ceased, never stopped. He was like a student is, constantly pumping people's brains about money laundering, about this, about that. About automobiles, about airplanes, about boats. In fact there was a guy in there for smuggling with boats and he spent hours and hours with him learning navigation,

and there was a president of a bank in there and he pumped him constantly about the banking system in America and how one can launder money, and he kept files and files on everything. He kept notes constantly. He never stopped. He was obsessed with it (Jung, 2000).

Following their release from prison, the two convicts used their knowledge to establish themselves as leading transporters and distributors for several Medellín core enterprises.

Lehder and Jung were certainly not the only small-time drug smugglers to parlay their prison time into lucrative criminal careers. Numerous former participants interviewed by Reuter and Haaga note that the personal contacts they made in prison allowed them to increase their participation in the narcotics trade significantly. In his autobiography, Jorge Valdés notes, "In prison I established relationships with some powerful individuals, contacts that I knew would come in handy once we were released." Indeed, Valdés used one contact, a former colleague who was visiting another inmate, to establish a new distribution route (Valdés, 1999, pp. 148, 183). These observations are echoed in personal interviews conducted with DEA officials, and indicate that the state's strategy of arresting and incarcerating large numbers of participants has the unintended effect of producing a more astute and better connected class of narcotics smuggler (Passas, 2000; Reuter & Haaga, 1989, p. 38; Smith, 2000a).

### Recording and Storing Information through Organizational Memories

Central to the process of organizational learning are the mechanisms by which organizations document and store knowledge and experience. Colombian trafficking enterprises record and store information through files, manuals, ledgers, notebooks, and correspondence that document practices and procedures and track resource flows. In

addition to monitoring inputs and outputs, record keeping allows leaders and managers to supervise participant behavior and prevent intra-organizational theft.<sup>8</sup>

Due to the illegal nature of their business dealings, record keeping is risky for participants. Drug enforcers may capture them during raids, in which case they become invaluable material evidence for criminal prosecutions (Cash, 1999; also, see Lupallo, 2000). Many trafficking enterprises seek to reduce these risks by minimizing their data collection activities, often relying on the unaided memories of participants or storing bits of coded information on scraps of paper that can be destroyed quickly as the need arises. Néstor claims that he avoided any and all written records during his several years in the business: “Nothing. Not even for monetary transactions. I found out right away you don’t need to do this” (Néstor, 2000). Homero stresses that participants in his trafficking group refrained from writing things down and relied on their own memories (Homero, 2000).

While Néstor, Homero and other traffickers are undoubtedly capable of recalling a great deal of information, human memories are inherently limited vessels for storing data. Individuals and organizations involved in multiple, large-scale transactions often require some formal documentation for keeping track of their dealings. Depending on their roles, participants may be expected to memorize an assortment of details, including quantities, prices, bank accounts, addresses, telephone and pager numbers, and code words and aliases. They are also obliged to remember numerous practices and procedures, such as processing formulas, transportation routes, warehousing and distribution routines, and communication rules. Former DEA official Tom Cash and other drug enforcers acknowledge that participants in trafficking enterprises document

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<sup>8</sup> For discussion of this point regarding a drug retailing street gang in the U.S., see Levitt & Venkatesh (1998).

such information “out of necessity.” Apart from Néstor, other direct participants agree. Emil argues, “you can’t have a [narcotics] distribution of such quantity, of such large volume, without papers” (Emil, 2000). Even Homero admits that his operation used an accounting system to keep track of enterprise finances. According to Homero, a participant who was insulated from trafficking operations maintained these financial documents (Cash, 1999; Bandera, 2000; Derian, 1999; Evans, 1999; Homero, 2000; McNamara, 1999; Merchán, 2000; Molano, 2000; Nyholm, 2000; Olson, 1999; Passas, 2000; Sanchez, 1999).<sup>9</sup>

The degree of formal record keeping in Colombian narcotics enterprises is, in part, a function of the size and frequency of their transactions. As Homero’s remark illustrates, participants frequently avoid creating formal records of their activities. However, the larger the organization, the more frequent its criminal transactions, the more likely it is to document at least part of its illicit operations. Core organizations that coordinate several multi-ton cocaine shipments per month interact with dozens of suppliers, customers, and even regulators. In order to monitor multiple transactions involving numerous parties, and safeguard the enterprise from theft, many entrepreneurs have found it necessary to establish formal accounting systems, complete with ledgers, computers, and accountants. Many groups use abbreviations, code words and cryptic notations to camouflage the content of their illicit communications (Aero, 2000;

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<sup>9</sup> What, then, explains the contradictory responses by Néstor and Emil? Why did one former participant consider record keeping unnecessary while the other found it indispensable? The answer is found in the informational inputs required to complete their respective activities. Néstor worked as an independent broker, bringing together marijuana and cocaine suppliers in Colombia with buyers in the U.S. While brokers provide a critical service in the Colombian narcotics industry, beyond contact information for different suppliers and buyers, little information is required to arrange such transactions. However, Emil was part of a transportation ring affiliated with a core organization. This group coordinated multi-ton cocaine shipments using a variety of different methods for hiding and transporting the contraband. The informational inputs required to coordinate such activity are greater than brokering, which helps explain the apparent discrepancy between the two participant’s responses.

Arreguin, 2000; Bagley, 1999; Francis, 2000; Homero, 2000; Lee, 1999; Morales, 2000; Zabudoff, 1999).

Miguel Rodríguez Orejuela required his cell managers to maintain diligent records of their trafficking activities, which were faxed back to the home office in Cali on a regular basis. Rodríguez Orejuela also hired numerous accountants to maintain records relating to different areas of his illicit operations, including: income and expenses derived from narcotics trafficking, monetary payments and personal gifts to government officials and politicians, phone lines subject to government surveillance, enterprise automobiles "authorized" by Colombian law enforcement authorities, and contributions from prominent traffickers to the organization's numerous political projects. Handwritten records were stored in accounting ledgers, often with aliases and coded notations. Electronic records were maintained on laptop computers, with backup copies stored on computer diskettes. When government anti-drug efforts forced Miguel Rodríguez Orejuela into hiding, he developed a filing system that allowed him to store important documents in different brief cases in secret locations throughout Cali. Rodríguez Orejuela numbered the briefcases and kept lists of the items contained in each one. This information was stored on a laptop computer used by a personal secretary, who accompanied his boss in hiding (Arreguin, 2000; Francis, 2000; Velásquez Romero, 2000; Pallomari, 1997, V. 35, 37-38; Reyes, 2000).

The organizational memories of Colombian narcotics enterprises are not restricted to documenting transactional inputs and outputs. Numerous core organizations have created manuals that detail rules and procedures regarding specific performance programs. One Medellín enterprise produced a pamphlet outlining practices for

managing a stash house in the U.S., including tips for keeping the lawn trim, not letting pets loose on the street, and going to the movies every Thursday night. These procedures were designed to avoid attracting the unwanted attention of neighbors and law enforcement officials to the stash house (Nordheimer, 1986; Passas, 2000).<sup>10</sup> In 1997, Colombian police officials discovered two manuals in the prison cell of a member the Rodríguez Orejuela organization. The first manual, brazenly entitled “To Successfully Carry Out an Illegal Flight, Analyze the Following Aspects,” outlined numerous procedures for completing an international drug flight. The document provided radio frequencies monitored by air traffic controllers, a list of radar installations in several Latin American countries and the geographic areas covered by each, and suggestions on how to avoid detection by law enforcement authorities. The second manual, “How to Give Testimony and Receive Judicial Benefits,” offered tips for incarcerated members on which crimes to confess to and other information for receiving the lightest possible sentence (*El Tiempo*, 1997; Farah, 1996). As these examples indicate, some Colombian trafficking organizations maintain sophisticated organizational memories. Participants draw on the knowledge and experience contained in these documents and manuals, as well as shared verbal understandings regarding practices and procedures, in completing their criminal activities.

### Interpreting Knowledge and Experience

In addition to gathering, recording and storing information, Colombian trafficking enterprises give meaning to these data through retrospective sensemaking. This refers to

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<sup>10</sup> Krauthausen and Sarmiento provide a similar example. According to them, in the 1980s one participant in Pablo Escobar’s security contingent prepared a manual “teaching the members of the organization how to infiltrate American society and how to avoid generating suspicion” (Krauthausen & Sarmiento, 1991, pp. 169-170, author’s translation).

the social process through which participants share perceptions and construct inter-subjective understandings of reality. Sensemaking is triggered when expectations, practices or procedures are interrupted by unforeseen events. Trafficking organizations operate in hostile and dynamic environments, which provide frequent opportunities for sensemaking. Interdicted drug shipments, destroyed processing laboratories, dismantled trafficking routes, seized profits, arrested participants, and impending legal proceedings all represent unforeseen events that disrupt the everyday activities of trafficking enterprises. In an effort to make sense of these problematic situations, participants communicate, share knowledge, and construct linkages between the present situation and prior conditions through conversations and *ad hoc* meetings. These meetings allow managers and participants to share perceptions of problems and analyze potential solutions (Daft & Weick, 1984, p. 286; Furden, 2000; Homero, 2000; Kacerosky, 1994; Pallomari, 1997, V. 36 & 37; Restrepo, 2000; Velásquez Romero, 2000a; Weick, 1995, pp. 45-46).

#### Discovery Process

The discovery process offers an interesting example of how some core trafficking organizations engaged in sensemaking processes. Discovery refers to a set of procedures in the U.S. legal system, including pre-trial hearings, through which parties in civil or criminal disputes access information that is likely to be used against them in court proceedings. Beginning in the 19<sup>th</sup> Century, these procedures were instituted to help disputants prepare for trial, encourage pre-trial settlement by informing all parties of the efficacy of their claims, and expose insubstantial claims that should not go to trial (*Encyclopædia Britannica Online*, 2001; Fuentes, 2000, p. 208).

In the 1990s, several Cali enterprises used these procedures to obtain access to indictments, search warrant affidavits, wiretap affidavits, criminal complaints, law enforcement intelligence reports, and other government documents that described in detail how U.S. authorities conducted their criminal investigations. U.S. based lawyers representing enterprise participants used discovery procedures to obtain these documents and send them to Colombia, where they were analyzed in meetings between leaders, their lawyers and high-ranking participants. The purpose of these sensemaking sessions was to determine how drug enforcers penetrated the organization's operations, identify confidential informants, learn about the latest tactics in criminal investigations, and devise strategies to avoid similar mistakes in future operations. These indictments and affidavits were also made available to mid-level participants who were ordered to study the materials in order to learn from and avoid the mistakes of their predecessors (Cash, 1999; DEA, 1993a, p. 21; Farah, 1997, 1999a; Fernandez, 2000; Francis, 2000; Kacerosky, 1994, pp. 36, 53, 67-68; McGee & Duffy, 1997, pp. 65-66; Nieves, 1997, pp. 12-13; Olson, 1999, 2000, pp. 59-60; Smith, 2000a; "Steve," 2000; Third Superceding Indictment, [no date], pp. 36-38; Thompson, 2000).

The practice of sharing information, analyzing problems, and constructing inter-subjective understandings is not unique to the Cali enterprises. Groups affiliated with the Medellín organizations also engaged in sensemaking through meetings and conversations. Moreover, there are indications that post-cartel enterprises also construct collective interpretations of their task environments, often, but not inevitably, in response to unforeseen events. Indeed, contemporary trafficking enterprises routinely analyze the experiences of the Medellín and Cali core associations in order to avoid committing the



same errors as their predecessors. They do so by reading about the innumerable exploits of the so-called cocaine cartels produced by Colombian and U.S. journalists, and by drawing on the experience of entrepreneurs and participants that worked for these organizations (Calderón, 2000; Camacho Guizado, 2000; Evans, 1999; Gale & Rodríguez, 2000; Merchán, 2000; Morales, 2000; Sanchez, 1999; Vargas, 2000).

### Applying Knowledge and Experience

Colombian trafficking enterprises change practices, procedures and performance programs in response to information gathering and interpretation at virtually every stage of the production, transportation, and distribution of psychoactive narcotics. Frequently, though not inevitably, these adaptations are reactions to feedback from a hostile and dynamic task environments. Facing challenges from illicit competitors and drug enforcement agencies, trafficking enterprises adjust their practices and protocols as quickly and often as circumstances warrant. Organizational survival, let alone satisfactory profits, demands it. Most behavioral adjustment occurs at the level of tactical routines. Trafficking enterprises routinely tinker with the practices and procedures used in their day-to-day activities. Less common, but equally important, are changes in strategic routines, including practices and procedures dealing with organizational goals and long-range plans. Routines that help trafficking organizations meet their targets tend to be retained and incorporated into existing performance programs; those that fail to do so are often discarded. In the sections that follow I examine changes in tactical and strategic trafficking routines over the last several decades. I begin by discussing numerous tactical innovations in drug processing, transportation, and distribution activities. I continue with an analysis of strategic innovations by trafficking enterprises,

including diversifying into new markets and products and altering their organizational structures.

#### Adaptations in Drug Processing Routines

Providers of precursor chemicals and drug processing laboratories alter their activities in a number of ways to improve the efficiency of their illicit operations and circumvent drug enforcers' efforts to restrict the supply of essential chemical inputs. For example, when Colombian police and military officials restricted the flow of certain solvents, such as potassium permanganate and acetone, to known drug processing areas, suppliers simply relabeled these products, using the names of unrestricted chemicals. They also removed precursor chemicals from their original containers and stored them in less conspicuous recipients, including gas cylinders, pesticide containers, and bottles of *aguardiente* (DEA, 1993b, p. 7; Montoya, 2000).

When such adaptations have proven ineffective, drug labs develop processing innovations to accommodate for the disruption of precursor chemicals. During Operation Conquest in 1996 and Operation Purple in 1999, police and military authorities reduced the flow of chemical inputs to certain coca growing regions in Colombia, forcing drug processors to alter their refining methods. Processors responded by substituting alternative, locally available inputs for those in short supply. In processing cocaine base, for example, chemists replaced kerosene and gasoline with alcohol, and cement with vegetable and tree ash. In refining cocaine hydrochloride, chemists substituted a number of solvents, including methyl ethyl ketone, methylene chloride, toluene, and ethyl acetate, for ether and acetone. Traffickers' ability to incorporate such a range of chemicals into their laboratory operations made it more difficult for drug enforcers to regulate the supply

of these inputs, many of which have legitimate uses unrelated to the production of psychoactive substances (Bagley, 1999; Clawson & Lee, 1996, p. 11; Cubides, 2000; DEA, 1993b, p. 8; Lee, 1999; Pérez Valdès, 2000a; Smith, 2000a; Uribe Ramírez, 2000; U.S. House, 1996).

In addition to finding alternative substitutes, processing labs have learned to manufacture and recycle chemicals in short supply. Some enterprises have developed their own filters to recycle restricted inputs, such as gasoline. Others have constructed elaborate facilities for storing and recycling chemical inputs. In 1991, the Colombian National Police (CNP) discovered a recycling/storage complex in the Colombian jungle that included a hydraulic pumping system and three-story distillers to clean previously used chemical solvents. According to the U.S. State Department, reprocessing innovations have reduced the need for shipments of precursor chemical into certain areas of Colombia (BINLEA, 1997).

More recently, trafficking enterprises have been producing precursor chemicals that traditionally were imported into Colombia. Over the past two years, CNP and Department of Administrative Security (DAS) units have discovered several different laboratories for manufacturing potassium permanganate and caustic soda, two essential substances for cocaine processing. Other processing innovations include using vapor eliminating devices to conceal strong chemical odors associated with cocaine processing, particularly in urban areas, and shifting to small, mobile processing labs that can be packed up and moved to another location on short notice. The latter innovation developed following the destruction of several industrial-sized processing complexes during the 1980s.

The combined effect of these innovations is to increase the difficulty of state efforts to disrupt drug processing operations in Colombia. Moreover, a number of officials attribute the rise in Colombian cocaine production in recent years to adaptations in processing technologies and practices (BINM, 1991, p. 100; Calderón, 2000; *Cambio*, 2000; Cook, 1997; DEA, 1993b, p. 8; *El Tiempo*, 2001a, 2001b; Hatch, 1997; McNamara, 1999; Moreno, 1997; Smith, 2000a; Westrate, 1994, p. 96).

### Adaptations in Transportation Routines

Changes in drug transportation routes and methods are some of the most common, and consequential, tactical adaptations by Colombian trafficking enterprises. Trafficking routes contain practices, procedures, people, places, and technologies for transporting supplies, resources, and other materials from one location to another. These performance programs are a critical component of the international drug industry. Without secure and effective routes, rapid movements of capital, precursor chemicals, equipment, refined narcotics, illicit profits, and participants are infeasible. Recognizing the significance of trafficking routes, government interdiction strategies often prioritize their disruption.

Over the last two decades, trafficking enterprises have consistently responded to drug enforcement pressure by refining existing transportation routes and developing new ones. Indeed, changing routes have become one of the most predictable outcomes in the competitive struggles between “narcs” and *narcos*. Once drug enforcers identify and dismantle a particular transportation route, large trafficking enterprises require only ten to fourteen days to re-organize their operations (DEA, 1993a, p. 14). During this time, participants gather and interpret information relating to the problematic situation, and adjust the geographic location of their routes to areas where the “heat” of drug

enforcement efforts is less intense. With one sea and two oceans, dozens of international airports, hundreds of clandestine airstrips, and thousands of miles of coastline from which to choose in Colombia and neighboring countries, trafficking rings have an almost unlimited array of transportation routes they can develop. Transportation groups alter embarkation points among dozens of ports and airstrips in Colombia, Ecuador, Venezuela, Panama, and Suriname. They shift from traditional central Caribbean routes (*i.e.* the Windward passage, Yucatan channel, and the Mona passage) to other passages in the eastern Caribbean, and back again. They form new maritime routes through the mid-Atlantic and the Pacific Ocean, and over-land routes through Panama, Central America Mexico, Brazil, Argentina, and Peru. They change transshipment points from the Bahamas and Jamaica to Costa Rica, Mexico, Guatemala, Puerto Rico, Haiti, the Dominican Republic, the archipelago of San Andrés y Providencia, and back again (Bagley, 1999; Berke, 1989; Brinkley, 1986; Camacho, 2000; Cash, 1999; Durfey, 1978, p. 77; Dye, 1998, pp. 248-250; GAO, 1999, p. 134; Gugliotta & Leen, 1989, p. 69; Marshall, 2001c; Mermelstein, 1990, p. 153-154; Rice, 1989, p. 83; U.S. House, 1978).

In addition to changing the geographic locations of their routes, trafficking enterprises adjust their transportation technologies and practices to avoid government surveillance and interdiction. One common adaptation is to vary the mode of transportation. When drug enforcers identify and intercept a particular air, sea, or land-based vessel used to transport narcotics, transportation rings change to different vessels, again following a period of re-adjustment in which participants gather and analyze the requisite information. A senior policy analyst with the Office of National Drug Control

Policy identifies several changes in transportation vessels by Colombian trafficking enterprises:

When we started going after the small planes they moved to the big jets. When we had figured that they had moved to the big jets then they started moving more by maritime. And when we started paying more attention to the maritime stuff... now you see a lot more fast boat stuff. When we started chasing the fast boats then every once in a while you'd see this stuff about the semi-submersibles (McNamara, 1999).

Changes in transportation vessels are not limited to the exportation of psychoactive drugs stage. At each phase of the transnational commodity chain, trafficking groups switch transportation modes in response to state interdiction efforts. When the Peruvian government implemented a policy to shoot down suspected drug planes in the early 1990s, transshipment groups shifted to riverine vessels to move coca paste and cocaine base into Colombia for further refining. U.S.-based transportation rings have used a variety of overland vehicles, including tractor trailers, trains, pick-up trucks, minivans, and sedans to ship cocaine across the country, switching among different types as necessary in order to avoid law enforcement efforts (Bajak, 1997; CNN, 1999; DEA, 1993a, p. 19; Derian, 1999; Emil, 2000; Faiola & Wilson, 2001; Frechette, 1997; Furden, 2000; Hinson, 1997; Johnson, 2000; Thompson 2000).

Trafficking enterprises also alter conveyance methods. Containerized cargo are particularly useful for smugglers because they provide dozens of options to hide illicit drugs within shipments of legitimate Central and South American exports to the U.S. and Europe, including vegetables and flowers, fruits and fruit juices, coffee and seafood, mechanical equipment, and an assortment of other commodities. When drug enforcers discover a particular scheme, enterprises quickly change to other containerized cargo routes already in operation, or develop new ones, sometimes by purchasing established

companies in Central and South America that export these commodities (Cash, 1999; Kacerosky, 1994; Reyes, 2000).

Former DEA official Cash describes how the Rodríguez Orejuela organization switched among different routes:

... you constantly saw a changing of technique and tactic. In '88 they were hollowing out cedar boards with a router, putting cocaine in Styrofoam containers [and] slipping them into the routed 2' x 10'. And they had cut 1" off that 2' x 10'... And then they glued it back on so you could imagine the amount of work in that... now when that was discovered... it was not too long after that the [concrete] fence post came up... That was after the lumber... So they bought the concrete factory that made these fence posts... And [in] the Cornerstone case you'll see that was about the 27<sup>th</sup> time that ship came in with fence posts... Harold Ackerman was their ambassador type representative here in Miami... He dealt in broccoli importing and exporting... they had a machine that packaged the cocaine just like a frozen broccoli thing that wrapped it and had it labeled. It's perfect. They bought a factory that did that. And then it was frozen too. As if it had something in it. And of course there were real products mixed in... it wasn't all cocaine... It's just like you get in the frozen foods in your refrig., in the grocery store, same size box... Then they brought it in coffee. It looked like coffee in containers of coffee... Vacuum packed... So they bought different facilities to do different things... but once we hit a couple of loads of that, the coffee stopped. Then they brought it in lucite blocks. They take these big lucite blocks and put 7 kilos of cocaine in it and put the lucite blocks in tar, in cans of roofing tar... Very, very well thought out (Cash, 1999).

When authorities dismantled a route, the leaders of the Rodríguez Orejuela enterprise would extrapolate lessons from the mismatch, often using their lawyers to gather the necessary information through the discovery process (see above). In court, Guillermo Pallomari testified that on several occasions Miguel Rodríguez Orejuela discussed the fall of the "lumber" route with other entrepreneurs "in order not to make the same mistakes that led to the falling apart of that route in the United States" (Pallomari, 1997, V. 36, p. 5850).

As these examples demonstrate, Colombian trafficking enterprises respond to government interdiction pressures by changing transportation practices and programs.

These adaptations allow them to continue to transship narcotics to consumer markets even as drug enforcement efforts intensify. The expectation that all routes, no matter how creative or ingenious, will eventually “heat up” or run into problems prompts smugglers to continually refine existing transportation programs and develop new ones, even when current arrangements are performing satisfactorily. As Homero emphasizes, “the routes always change... in order to avoid awakening suspicions, continually, so they don’t get heated” (Homero, 2000). Nestor makes a similar point:

[Smuggling methods were] Constantly changing due to problems and circumstances. Weather, surveillance, places, etc., all make you change. When a place is heated up, you move... If you don’t move after three years, then you’re dead meat. What happens is that within three years you will get some kind of heat. You have to change your operation and location. You might be working out of Grey Harbor, and everything is good there, but say some heat comes up, so you have to check out the situation and make sure it’s safe again. For a month or so, some place might get the whole heat (Nestor, 2000).

Table 5-3 Transportation Innovations in Drug Smuggling Operations

Use “dry runs” and small drug shipments to test new routes or existing ones thought to be under surveillance	Break down multi-ton loads into smaller consignments
Modify transportation vehicles with secret compartments for hiding drugs	Outfit vessels with state-of-the-art surveillance and communications technologies
Install extra fuel tanks and diesel engines to increase the range of air and sea craft	Use decoy vessels to divert law enforcers from vehicles that contain drugs
Fly around “secret” radar installations	Air drop drugs over land or water to avoid landing planes
Develop alternate return routes in case of law enforcement surveillance	Pack psychoactive drugs in ice tubes and weld them to ship hulls
Liquefy cocaine and transport it in water tanks, bottles, and other recipients	

*Sources:* Bagley (1999), BINLEA (2001), DEA (1993a, 2000) Derian (1999), Eddy *et al.* (1988), Fuentes (1998), Henderson (1992), Johnson (2000), Kacerosky (1994), Mermelstein (1990), Néstor (2000), Pan (1996), Pérez Valdès (2000), Reyes (1999), Rice (1989), Third Superseding Indictment (no date), Thompson (2000).

When trafficking enterprises develop these and other innovations, they expand their operational repertoires, providing participants with a greater range of performance



programs to draw on when transporting psychoactive drugs, money, supplies or other materials. The more transportation programs within an organization's repertoire, the greater its ability to adapt to changing circumstances. An enterprise with ten established routes for shipping cocaine to the U.S. has a greater variety of practices, technologies, and geographies from which to choose than an organization with only one route. Other factors considered equal, the more diversified enterprise will be better positioned to respond to the constant flow of problematic situations, including seizures, arrests and theft, that characterize the hostile environment of the psychoactive drug industry.

#### Adaptations in Distribution Cells

Distribution cells dispense psychoactive drugs to independent wholesalers, collect revenues from these transactions, and repatriate the profits to owners and investors in Colombia and elsewhere. In handling large amounts of illicit drugs within consumer countries they confront considerable environmental hostility, much of it emanating from law enforcement agencies that seek to dismantle their operations. Colombian distribution cells have developed a variety of technological and structural adaptations to reduce their exposure to drug enforcers.

Technological adaptations refer to changes in the material and symbolic technologies that participants use to communicate information, transport products and profits, and store psychoactive drugs pending wholesale distribution. Participants routinely adapt their communications technology by changing telephone and facsimile numbers, using multiple pay phones located in different areas, switching pagers among different participants, purchasing new cellular phones, pagers, and prepaid telephone calling cards and discarding old ones, and using encryption technology to block drug

enforcers' attempts to intercept their communications. Participants also change code words and notations to communicate transaction details and store records.

Distribution cells adapt transportation technologies by purchasing new vehicles on a regular basis, repainting automobiles following a drug delivery, renting cars instead of buying them, using low-profile automobiles, and modifying delivery cars with larger trunks, special air shock absorbers, and customized engines. Changes in warehousing technologies include creating new front companies and renting warehouses to store narcotics, changing warehouses, liquidating existing stash houses and apartments and renting new ones, using different stash houses on a rotating basis to store drugs, and constructing steel vaults in participants' residences to hide money, narcotics, weapons and sensitive documents (Cash, 1999; Farah, 1999a; Fernandez, 2000; Fuentes, 1998, pp. 102, 107-108; Johnson, 1993, pp. 83, 106; Kacerosky & Tinsley, 1992, pp. 6, 16; Mermelstein, 1990, pp. 144-145; Morales, 2000; Smith, 2000a; Third Superseding Indictment, [no date], pp. 28, 47; Valdés, 2000; Villega, 2000).

Structural adaptations in distribution cells refer to changes in rules and procedures participants use to carry out their daily activities. Following the arrest of his cell manager for Miami, Miguel Rodríguez Orejuela ordered the replacement to study court documents obtained through the discovery process in order to learn how the U.S. government had penetrated the cell's communications system. When it became clear that law enforcers had wiretapped the cellular phones of several participants, Rodríguez Orejuela decreed new communication rules for the organization. From then on, cell workers were to avoid using cellular phones when discussing business. When cell managers called the Cali office they were required to use randomly selected pay phones located on streets and in

shopping malls, and pay for the calls with coins and prepaid debit cards. Other distribution cells have been known to change routines for transporting narcotics and money, managing stash houses, and repatriating illicit profits (Kacerosky, 1994; McGee & Duffy, 1997, pp. 65-66, 147).

In addition to these procedural adaptations, distribution cells amend their operation by modifying human resources. These adaptations include hiring new personnel, rotating workers among different cells and stash houses, assigning participants to different roles, and sending participants that have been compromised by law enforcement efforts back to Colombia.

Structural and technological adaptations in distribution cells are often provoked by problematic situations, including police surveillance, stash house raids, arrests, seizures, and theft. These events cause considerable emotional arousal among managers and participants and provide sufficient stimuli for gathering, interpreting and applying information. The range of corresponding procedural and technological adaptations vary according to the damage caused by the mismatch. The overriding objective of tactical adjustments is to minimize damage while maintaining cell productivity, or, if operations are suspended, reestablish production as soon as possible. If damage to the cell is minor, adaptations are likely to be relatively modest, such as removing one or two cell workers, changing telephone numbers are changed, and relocating stash houses. If damage is more severe, adaptations are likely to be more substantial. In addition to changing communications, transportation, and warehousing technologies, leaders and managers may develop new practices and procedures for carrying out the cell's daily activities. Moreover, a number of participants are likely to be replaced. Yet, even these more

profound changes can be implemented within a month or so, after which the cell can resume its illegal activities. In cases where the damage is extreme, cells are completely shut down, and participants transferred to other parts of the enterprise or temporarily retired from active involvement in the organization's illegal activities. Some enterprises transfer existing cells or create new ones in different areas where local drug enforcers have fewer resources (Butterfield, 2002; Fuentes, 1998, pp. 234-235; Mermelstein, 1990, pp. 122-123).

Colombian distribution cells also change their operational practices and procedures even before law enforcers identify them. Cell workers are often required to change communications equipment and stash house locations, sometimes as frequently as every few months. In some operations, leaders rotate participants and even managers among different cells on an annual or even biannual basis. Cells also develop new routines for delivering drugs, collecting money from wholesalers, and repatriating profits on a regular basis. Periodic adaptation is a standard risk reduction strategy designed to shield these criminal operations from the vagaries of drug enforcers and illicit competitors. By changing their operations on a regular basis, distribution cells stay several steps ahead of law enforcement, allowing them to survive hostile task environments for extended periods (Fuentes, 1998, p. 253).

#### Strategic Learning in Colombian Trafficking Organizations

Trafficking enterprises develop strategies in order to satisfy basic aims, such as attaining sufficient profits and ensuring organizational survival. These immediate and long-range action plans exist in virtually all phases of their illicit operations. While trafficking enterprises routinely tinker with techniques and tactics, it is less clear whether

they change their strategies, long-range objectives, and basic organizational structures as a result of acquiring and interpreting information. The data gathered in this research suggest that some Colombian enterprises adjust their strategies in response to feedback. Prominent examples of strategic learning include diversifying into new products and markets, and restructuring criminal operations. I examine both of these below.

### Diversifying into New Products and Markets

On numerous occasions Colombian trafficking organizations have expanded into new markets and products. In the 1960s and 1970s, contraband smuggling groups expanded into marijuana exports, fueling the short-lived *bonanza marimbera*. By the late 1970s, some marijuana smugglers diversified their product lines to include methaqualone and cocaine, in effect becoming polydrug organizations.<sup>11</sup> Smugglers kept transportation costs low by exporting these less bulky psychoactive substances with their marijuana shipments. Some traffickers required their wholesale customers to purchase fixed quantities of their new commodities along with the more popular marijuana.

By the mid-1980s, Colombian methaqualone and marijuana declined, in part due to government interdiction. However, the Colombian drug industry experienced considerable growth as the amount of U.S. and European bound cocaine exports rose substantially. In the middle of the cocaine boom, numerous trafficking enterprises diversified into the heroin trade. Similar to the *marimberos*, cocaine traffickers piggybacked heroin on their cocaine shipments and required U.S. wholesalers to accept small amounts of the new product. Using distribution systems developed by the core

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<sup>11</sup> Methaqualone is a nonbarbiturate sedative better known by the trade names Quaalude, Mandrax, and Sopors. In the 1970s it was manufactured in Germany and Hungary and imported to Colombia in powder form, where it was packaged and re-exported to the U.S. There are also reports that the drug was at least partly manufactured within Colombia by the country's legitimate pharmaceutical industry (Abadinsky, 1997, p. 387; *New York Times*, 1980; Reuter, 1992, p. 170; Thoumi, 1995, p. 127).

cocaine enterprises, trafficking groups marketed Colombian heroin in major U.S. markets. In an aggressive strategy to undercut their competitors and increase market share, Colombian enterprises offered a low-priced product at high levels of purity (Bagley, 1999; Berquist, 2000; Betancourt & García, 1994, p. 107; DEA, 1994a, pp. 6-7; Evans, 1999; Farah, 1999a; FBI, 1993; GAO, 1999, p. 19; Olson, 1997, p. 74; Reuter, 1992, p. 170; Ruiz Hernández, 1979, p. 180; Sanchez, 1999; *Semana*, 1999; Stutman, 2000; Thoumi, 1995, p. 127; Valdés, 2000; Valencia Tovar, 2000; Wroblewski, 1987; Zabudoff, 1999).

Colombian trafficking organizations have also spread to new markets. In the 1980s and 1990s, a number of core enterprises expanded into the lucrative European and Japanese markets, where wholesale cocaine rates were approximately two to three times the average U.S. price. To facilitate their entry, trafficking groups formed partnerships with criminal organizations established in these markets, including Italian Mafiosi and Japanese Yakuza. This expansion increased in the latter half of the 1990s, particularly following the break-up of the cartels. Post-cartel Colombian operations export psychoactive drugs to Western and Central Europe, Russia and the Newly Independent States, Japan, Australia, in addition to the U.S. (Abadinsky, 1997, p. 268; Bagley, 1999; DEA, 1998, pp. 32-33, 37; Farah, 1997; Griffith, 1999; Perl, 1999; Thoumi, 1995, endnote 18, p. 150; Torres, 2000; Zabudoff 1997, p. 24).

When shifting to new markets and products, trafficking enterprises use existing stores of knowledge and experience. Information regarding illicit smuggling is often fungible across product lines. *Contrabandistas* found that many of the practices and procedures for smuggling black market cigarettes and liquor could be used, with few

modifications, to transport marijuana. *Marimberos* subsequently determined that their transportation and distribution routines could also be applied to cocaine smuggling. *Cocaleros* discovered they many of their cocaine distribution and marketing techniques worked well for heroin (Homero, 2000).

#### Changing Organizational Structures: "Smaller is Better"

From 1989 to 1996, the Colombian government, in close cooperation with the Drug Enforcement Agency and other U.S. enforcement organizations, dismantled a number of trafficking enterprise, including several of the leading core organizations from Medellín and Cali. Since then the CNP and DEA have continued to identify and dismantle prominent enterprises from the Northern Cauca Valley and Atlantic Coast areas (see Chapter 2). During this period, many trafficking enterprises were selected out of the drug industry by successful law enforcement. Many others, however, adapted to the growing hostility of their task environments by revamping structures and operations. Surviving remnants of the core organizations downsized and decentralized, creating hundreds of independent firms that specialize in specific functions. Newly emergent groups shared these features, adding to the industry's "small is beautiful" incarnation. New and reformed enterprises were not only smaller than their predecessors, but flatter, often comprising no more than two layers of management and a dozen participants. They also sought to maximize operational secrecy, changing smuggling practices that had been identified by drug enforcers, and eschewing violence in their business dealings. Different groups, including former competitors, pooled their resources and cooperated through transnational networks, often organized on an *ad hoc* basis. Numerous post-cartel enterprises removed themselves from U.S. drug markets, preferring to let other

organizations accept the risk of direct participation (Aero, 2000; Arreguin, 2000; Calderón, 2000; Camacho Guizado, 2000; Contreras & Ambrus, 2000; Darling, 1996; Farah, 1997; Francis, 2000; Ledwith, 2000; Lyons, 1997; Morales, 2000; Nicosia, 2000; Oporto, 2000; Oppenheimer, 1997; Rabasa & Chalk, 2001; *Semana*, 2000a).

Many of these changes emerged as a direct result of drug enforcers' ability to penetrate and dismantle the big cartels, and the reactivation of Colombia's extradition treaty in 1997. Collectively, they represent a significant shift in the marketing strategies of Colombian traffickers. For the first time since the early 1970s, these criminal enterprises no longer endeavor to dominate wholesale distribution in the lucrative U.S. market.

The opportunity costs associated with this change are considerable. As economists point out, most value added in the international drug trade occurs at the wholesale and retail distribution stages in consumer markets, where risks to suppliers are highest. By removing themselves from importation and wholesale distribution in the U.S., Colombian traffickers sacrificed market share and profits to competing organizations in exchange for greater security from drug enforcers. Interviews and other sources suggest that these adaptations were part of a deliberate strategy by Colombian traffickers, indicating that at least some organizations dispel the profit motive to ensure the integrity of their operations (Arreguin, 2000; Crank, 2000; DEA, 2001a; Francis, 2000; Oporto, 2000; Smith, 2000a, 2000b; Ledwith, 1999, pp. 123-124; Marshall, 2001b; Reuter, 1985; Thoumi, 1995, p. 135).<sup>12</sup>

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<sup>12</sup> When asked how they knew that this strategic shift was, in fact, part of an intentional decision-making process, several officials responded that their knowledge was based on intelligence of these organizations gathered through both eavesdropping technologies (*i.e.* wiretaps & other recordings) and human resources (*i.e.* confidential informants).



### Obstacles to Learning by Colombian Trafficking Organizations

Not all trafficking enterprises learn. Indeed, drug enforcers' success in identifying, infiltrating, and eviscerating dozens of psychoactive drug operations over the past two decades belies facile interpretations of learning. If Colombian trafficking enterprises are such effective learning organizations, why have so many been dismantled? This question directs our attention to the numerous impediments confronting criminal enterprises as they seek to adapt to environmental change and uncertainty. As with participants in legally sanctioned firms, drug traffickers make decisions based on imperfect information, they are prone to biases when interpreting feedback, and they fail to change practices and procedures when they should. Given their status as illegal organizations, trafficking enterprises face additional obstacles to learning. The need to maintain secrecy about their operations hampers their ability to gather, interpret and apply knowledge and experience.

#### Restricted Information Flows

Trafficking enterprises conduct their activities with the utmost secrecy. In addition to camouflaging their operations and monitoring drug enforcement activities, they maintain secrecy by restricting information flows. Leaders and managers provide workers with the minimal knowledge they need to perform their immediate tasks. Moreover, the compartmentalized cell structures of many trafficking enterprises are designed to limit interaction across sub-units. While these strategies are necessary to protect core technologies from exploitation by drug enforcement agencies and illicit competitors, restricting communication within and across organizations impedes robust information gathering and interpretation that are necessary for learning.

Compartmentalization leads to loss of tactical knowledge in trafficking enterprises. Moreover, it affects traffickers' ability to learn from their own and others' experience. In multi-task enterprises, such as the core networks, compartmentalization hampers information sharing and interpretation between different cells. One implication is that effective practices and procedures developed in one cell are unlikely to diffuse across the enterprise, unless it captures the attention of a cell manager or workers from different cells communicate on a regular basis (which defeats the purpose of compartmentalization). In highly compartmentalized operations, different cells are unable to benefit from the innovations of their colleagues. Moreover, compartmentalized enterprises may experience the same problems repeatedly because different sub-units cannot access the experience of their peers.

In compartmentalized trafficking enterprises, intelligence regarding drug enforcement activities may also remain localized, reducing participants' ability to recognize patterns in law enforcement practices. More generally, compartmentalization produces participants that are ill informed about the overall operations of their enterprise. One of my former participant respondents, Emil, had been a low-level member of a core-affiliated transportation cell. While he was able to discuss his own activities in detail, throughout the two hour interview it became increasingly clear that his knowledge of the overall operation was limited (Emil, 2000). Lacking general knowledge of the enterprise, workers such as Emil are limited in their ability to suggest improvements in their organization's strategic routines.

However, it is important not to overemphasize the negative implications of compartmentalization on organizational learning. Although numerous respondents

recognized the negative impact of this risk reduction strategy on information flows, none suggested that it prevented these criminal enterprises from adapting to external pressures. Compartmentalization does not stop communication within trafficking enterprises but channels it according to the decision-making hierarchies of the organization. Compartmentalization restricts communication across functional sub-units, such as between transportation and distribution cells, not between subordinates and supervisors. Managers have access to the knowledge and experience of their underlings. The more decision-making authority an individual wields within the enterprise, the greater his or her access to the organization's accumulated knowledge base. This suggests that leaders and high-level managers have the information they need to make effective decisions. Moreover, informal mechanisms, such as social gatherings, provide opportunities for cell workers to share and interpret information beyond their own immediate experience (Fernandez, 2000; Gale & Rodríguez, 2000; Molano, 2000; Olson, 1999; Perl, 1999; Thompson, 2000; Torres, 2000).

#### Organizational Memories and Participant Turnover

Many trafficking enterprises find creating and storing records pertaining to their illicit activities to be a necessary, if perilous, endeavor. To keep track of the myriad details involved in their transactions, participants document various aspects of their operations in ledgers, notebooks, and computer files. However, when information is stored in records it becomes vulnerable to capture and exploitation by regulators, competitors, and turncoats. Leaders are well aware of the double-edged nature of record keeping, and seek to minimize their data storage activities, relying instead on the human

memories of managers and participants. While this practice reduces one source of vulnerability for trafficking enterprises, it creates another.

Knowledge and experience that exists only in the minds of individuals is more likely to be lost when they cease to be participants. The higher the individual in the organization's decision-making hierarchy, or the more specialized his or her personal knowledge, the more disruptive the loss will be to the enterprise. For this reason, drug enforcers often seek to capture high-ranking participants, such as chief accountants, that contain a detailed knowledge of their organizations. High rates of personnel turnover, a common feature in some trafficking enterprises, make the accumulation of experience difficult, and can impede organizational learning (Parra, 2000). Trafficking enterprises that lack organizational memories experience difficulty in learning from experience, particularly when there is little continuity among participants. Such organizations are more likely to repeat tactical and strategic errors, increasing their exposure to drug enforcers.

Irrespective of personnel turnover, knowledge and experience that is not accessed for long periods can also be lost. Participants not only gather, interpret and apply information, they also forget. Organizational forgetting is particularly problematic when knowledge lies dormant, as during periods of low productivity (Benkard, 1999; Buell, 2000). Colombian trafficking enterprises often experience periods of little or no activity due to lag times between shipments and the need to reduce or suspend operations to avoid drug enforcers. During these frequent intervals, participants forget important details in their day-to-day undertakings, and when operations start back up again, they must "relearn" their roles, causing further delay before the enterprise returns to peak

productivity. While organizational forgetting is a common problem among trafficking enterprises, it is exacerbated in organizations where participants lack mechanisms to store, share, and retrieve collective memories. Without accounting ledgers, manuals and oral traditions to remind them of the innumerable details involved in their daily activities, participants require more time to relearn their roles and responsibilities following periods of extended inactivity.

However, the loss of accumulated knowledge and experience in trafficking organizations due to personnel turnover is not always a bad thing. A number of organization theorists stress that turnover can assist organizations by forcing them to "unlearn" unsatisfactory practices and procedures that hamper performance (Hedberg, 1981, p. 18; Nystrom & Starbuck, 1984, p. 58; Virany *et al.*, 1996). Changing personnel is a fast, effective method for removing practices and procedures that led the trafficking enterprise to an undesirable state of affairs. By bringing in new people that possess novel solutions to problems that plagued former participants, turnover also increases organizational flexibility and competitiveness. In this respect, limited personnel turnover may actually help some trafficking organizations survive dynamic and hostile task environments. By increasing the amount of turnover among Colombian trafficking enterprises in the 1990s, drug enforcement agencies may have unintentionally helped these criminal organizations develop structural characteristics essential for long-term survival (Hedberg, 1981, p. 18; Morrison, 1997, p. 18; Nystrom & Starbuck, 1984, p. 58; Virany *et al.*, 1996).

### Additional Barriers to Learning

Other factors may also impede learning in Colombian trafficking enterprises, including the obscure quality of tactical information regarding criminal activities, the practice of rotating personnel among different cells, and the failure to apply negative feedback to immediate circumstances.

Given the clandestine nature of trafficking in illegal psychoactive substances, information regarding past and current activities is often hazy and opaque. To some extent trafficking enterprises foster this situation by using code words and aliases to communicate sensitive transactional details and maintaining strict secrecy about impending operations. However, a lack of clarity in communication can have negative implications for organizational adaptation. The judicious use of code words and aliases can lead to frequent misunderstandings among participants as they struggle to make sense of transactions and problematic situations. Interpretations based on woolly data and miscommunication are likely to be distorted and may lead to ill-suited tactical and strategic adaptations.

The practice of transferring personnel to different parts of an enterprise impedes learning when it is so frequent and extensive as to prevent the accumulation of institutional knowledge. If participants and managers are shuttled to different cells every month or so, they are likely to find it difficult to accumulate enough experience in any one role and location to benefit the organization. However, periodic rotation can also enhance learning by allowing participants with different areas of expertise to share their knowledge and experience. Rotation of personnel is most likely to benefit trafficking enterprises when it occurs regularly, but not too frequently, as on an annual or even bi-

annual basis. Moreover, rotation is less disruptive when there is some continuity of personnel in the original cell and the enterprise maintains active and accessible organizational memories.<sup>13</sup>

Sometime participants receive critical feedback but fail to apply it to their immediate activities, resulting in sub-par performance or apprehension by drug enforcers. For example, participants in a distribution cell from the Rodríguez Orejuela enterprise received feedback leading them to believe that an incoming drug shipment was under surveillance by U.S. officials. In spite of this knowledge, Miguel Rodríguez Orejuela and his cell manager ordered cell workers to receive and break down the containerized cargo shipment, which led to the arrest of several workers. One participant immediately turned state's evidence, and testified against his former colleagues in several criminal proceedings, causing significant damage to the enterprise (Johnson, 1993).

It is unclear why Rodríguez Orejuela allowed the shipment to continue when he received information that it was under active surveillance. Informed speculation suggests several possibilities. One is that the Rodríguez Orejuela's need for profits accruing from the sale of the shipment outweighed the expected probability of interdiction. Second, it is possible that he and his cell manager did not find the information regarding surveillance to be credible. Third, they may have been unable to tease out this potentially useful signal from environmental "noise." Fourth, the cell manager may have failed to communicate the information adequately to Rodríguez Orejuela, leading him to misunderstand the gravity of the situation. Fifth, other demands on his and the cell manager's attention may have caused them to make a decision without adequately

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<sup>13</sup> Of course, the longer a participant or manager remains in any location, the greater his exposure to law enforcement efforts. As with other aspects of organizational design in criminal enterprises, there are tradeoffs to this practice.

considering possible consequences and alternative actions (the garbage can model of decision-making). Fifth, they may have decided to the shipment to proceed in order to divert drug enforcers from other ongoing activities. Sixth, they may have determined that the participants involved in the transaction were dispensable. These and other factors may have combined to influence what was, in retrospect, a shortsighted decision. For whatever reason, the Rodríguez Orejuela organization's inability, or unwillingness, to change its behavior based on feedback led to a significant mismatch for the enterprise, indicating that even the most sophisticated criminal organizations are sometimes incapable of making simple adjustments in tactical routines.

### Conclusion

Colombian trafficking organizations learn. Participants in these criminal enterprises routinely gather, interpret and apply information to practices, procedures, and performance programs in order to reduce risk and achieve satisfactory profits. Trafficking organizations develop mechanisms for recording, sharing, and constructing knowledge. These practices and procedures facilitate the diffusion of information among nominally independent groups. When enterprises draw on knowledge and experience to alter existing routines or create new ones, they expand and diversify their operational repertoires. The more performance programs within an organization's repertoire, the greater its ability to adapt to the vicissitudes of drug enforcement.

However, not all trafficking enterprises learn. A variety of obstacles, including imperfect information, ambiguous communication, compartmentalized structures, personnel turnover, faulty interpretation, and organizational inertia, impede organizational adaptation. While none of these factors inevitably prevents learning, each



of them can, and they are all found—to varying degrees—in Colombian trafficking organizations. Due to the intense hostility of the drug enforcement environment in recent years, trafficking enterprises that fail to adjust their tactical and strategic routines on a regular basis do not survive for long. Poor learners are selected out of the transnational drug trade relatively quickly, leaving behind organizations with structures and operations conducive to learning. One critical feature of the environmentally fit is the ability to quickly alter their practices and procedures as a result of gathering and analyzing feedback.

Colombian trafficking enterprises are not the only organizational learners of interest in this study. Drug enforcement agencies also seek to change their practices and procedures in response to feedback. The extent to which they do so is the subject of the following chapter.

## CHAPTER 6 ORGANIZATIONAL LEARNING BY DRUG ENFORCEMENT AGENCIES

Similar to the criminal organizations they seek to disrupt, drug enforcement agencies, represented by such bureaucracies as the U.S. Drug Enforcement Administration (DEA) and the Colombian National Police (CNP), acquire, analyze, and apply knowledge and experience to practices, programs, and policies that guide collective behavior. Over the past several decades, drug enforcers from Colombia and the U.S. have implemented a variety of administrative and operational reforms in response to feedback from state institutions and changes in the transnational drug trade.

This chapter examines organizational learning as experienced by Colombian and U.S. drug enforcement agencies. The chapter begins with a summary of the results of dissertation interviews that discuss the topic of state learning. I follow this with a discussion of the intelligence activities of U.S. and Colombian drug enforcement agencies, including the practices, procedures, and programs they use to gather, interpret, and apply information. The discussion illustrates how these practices and programs have changed over time, allowing U.S. and Colombian police officials to improve their understanding of the illicit drug industry. Next, I analyze numerous adaptations in law enforcement operations over the past several decades, with specific reference to the DEA and CNP, the preeminent drug enforcement bureaus in their respective governments. After demonstrating that numerous innovations by drug enforcers have allowed them to better target major trafficking organizations, I present the concept of competitive learning

games to describe how these state and non-state competitors learn through their repeated interactions. I then examine the organizational and environmental conditions that tilt the playing field in favor of trafficking enterprises.

### A First Cut II: Quantifying Interview Results

Do drug enforcement agencies change their practices, procedures, and programs *as a result* of acquiring and analyzing information? The original survey instrument did not address the issue of state learning.<sup>1</sup> Therefore, unlike the questions discussed in Chapter 5, those on state learning were not put to all of the respondents. Fortunately, the semi-structured format of my interviews provided the flexibility to discuss the issue when it emerged, which was surprisingly often. On numerous occasions, government officials pointed out that their agencies learn from experience. In one interview, a high-ranking official within the Colombian National Police (CNP), stressed that his organization learned by studying the *narcotraficantes* and their methods of operations (Gallego Castrillón, 2000).<sup>2</sup> Similar comments were made by other knowledgeable officials, including the U.S. Ambassador to Colombia, the director of the State Department's Narcotics Assistance Section in Colombia, the DEA deputy director for Colombia, the head of a CNP investigative unit, the director of the CNP's aerial eradication program, and the head of the United Nations Drug Control Program in Colombia. In all, twenty-

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<sup>1</sup> An explanation is in order. Originally, the empirical scope of the research was limited to Colombian drug trafficking organizations. Drug enforcement agencies were not part of the original research design or dissertation prospectus. However, in the course of undertaking the research, I realized that the DEA and CNP were also changing practices, procedures, and performance programs in response to environmental feedback, at which point I began gathering data on state learning. Unfortunately, fewer interviews systematically addressed the topic of state learning. This chapter examines the relevant materials.

<sup>2</sup> Similar comments were made by the U.S. Ambassador to Colombia, the director of the State Department's Narcotics Assistance Section in Colombia, the deputy director of the DEA in Colombia, the head of an elite CNP investigative unit, the director of the CNP's aerial eradication program, the head of the United Nations Drug Control Program in Colombia, and other knowledgeable officials (Bandera, 2000; Frechette, 1997; Hinson, 1997; Lupallo, 2000; Molano, 2000; Moreno, 1997; Nyholm, 2000; Oporto, 2000; Pineda, 2000).

five respondents addressed the topic, all of them replying in the affirmative. Consistent with the sample's bias toward U.S. and Colombian law enforcement officials, the overwhelming majority of responses came from this group (N=17). In addition, two Colombian scholars and one former participant affirmed state learning, providing examples to support their contentions. Table 6-1 classifies respondents according to their responses to the question of drug enforcement learning.

Table 6-1 Does the State Learn? Results from Interviews

Type of Respondent	Affirmative	Negative	Not Discussed
Colombian government officials	12	0	14
U.S. government officials	9	0	15
IGO official	1	0	0
Colombian journalists	0	0	4
U.S. journalists	0	0	2
Colombian scholars	2	0	9
U.S. scholars	0	0	3
Former participants	1	0	4
TOTAL	25	0	51

The interview results indicate strong support among respondents for the proposition of state learning. However, only one-third of those interviewed actually addressed the issue of adaptation by law enforcement agencies. It is possible, though admittedly unlikely given the existing results, that as many as two-thirds of the respondents do not support the notion of learning by drug enforcement agencies. Of greater potential significance is the sample's bias toward government officials. Eighty-eight percent (N=22) of the respondents that addressed drug enforcement learning were active employees of the U.S. or Colombian governments at the time of their interview. It is not surprising that these officials, many of whom design and carry out drug enforcement policies and programs, would be eager to affirm the notion of state learning.

The sample's bias toward drug enforcers and government officials more generally dictates that I maintain a cautious attitude when interpreting the interview results. However, the overwhelmingly affirmative responses suggest that I remain open to the possibility of drug enforcement learning. As in the preceding chapter, a more useful determination of learning comes from a detailed examination of the primary and secondary source data gathered in this research, rather than a simple quantification of responses pro and con.

### Drug Enforcement Intelligence Activities

Intelligence refers to the collection, organization, analysis, and dissemination of information for policy makers and other government officials involved in the formation and execution of foreign, defense, and economic policy. Drug enforcement intelligence refers to the collection, organization, analysis, and dissemination of information for officials that design and implement counter-narcotics policies and programs. Intelligence is critical to effective drug enforcement. To allocate resources, design programs, and evaluate results, law enforcers need accurate information about existing trends in the illicit drug industry. To intercept drug shipments, destroy processing labs, confiscate illegal proceeds, and dismantle trafficking enterprises, they require timely and reliable information about participants in these criminal conspiracies and their methods of operation. Intelligence is also important to drug enforcers' ability to learn from knowledge and experience. To alter practices, procedures, and policies with the purpose of improving drug enforcement, they need timely and reliable information about specific trafficking enterprises and their methods of operation (Loch Johnson, 2000; McDonough,

2000; Nadelmann, 1993, p. 142; Reuter *et al.*, 1988, p. 40; Richelson, 1999, p. 2; Rindskopf-Parker, 2000; Sims, 1995, p. 4).

The production of accurate, timely intelligence regarding clandestine trafficking enterprises is an ongoing challenge for U.S. and Colombian law enforcement bureaus and intelligence agencies. Trafficking enterprises do not publish annual reports, leaving this to the government bureaucracies charged with disrupting them. Moreover, they constantly change their practices and procedures, limiting the time frame for reliable drug enforcement intelligence. Notwithstanding these difficulties, the U.S. and Colombian governments have improved their counter-drug intelligence capabilities in recent decades. These improvements have been instrumental in drug enforcers' ability to identify and dismantle a number of leading trafficking enterprises, including the Cali core organizations. Better intelligence also helps police agencies keep abreast of the latest developments in the illicit drug industry (Arreguin 2000; Francis 2000; Serrano Cadena, 1999, pp. 147-149).

Counter-drug intelligence comes in three varieties: tactical, operational, and strategic. Tactical drug enforcement intelligence refers to information of immediate use in ongoing criminal investigations targeting specific enterprises. Examples of tactical intelligence include the names and aliases of participants, telephone and fax numbers, makes and models of transportation vehicles, and stash house locations. Operational intelligence is more general information about participants, organizations, technologies, and smuggling routes that can be used in support of ongoing investigations. Strategic intelligence refers to information about broad trends and patterns in the international drug trade, such as coca leaf production estimates, country-specific drug threat assessments,

and the structure and operations of major trafficking organizations. Drug enforcers and prosecutors use tactical and operational intelligence to allocate resources, implement specific operations, and conduct criminal investigations. Policy makers, including department and agency leaders, use strategic intelligence to determine funding priorities, predict future drug threats, and develop long-term plans and programs (GAO, 1998, pp. 2, 8-9; GAO, 1999, p. 65; Marshall, 1999, p. 25; Nadelmann, 1993, p. 207; McDonough, 2000, p. 218).

Drug enforcement agencies collect intelligence from human, electronic, photographic, and documentary sources. Human intelligence sources include cooperating witnesses, criminal informants, and law enforcement officials. Electronic sources include intercepted telephonic and radio communications, and electronic emissions from radar stations and other electromagnetic sensing devices. Photographic or imagery intelligence includes images of persons or objects captured through cameras, video recorders, and sophisticated aerial and satellite imaging systems. Documentary intelligence includes records, files, and other documents obtained from clandestine and open sources. Clandestine documentary sources include financial records, correspondence, computer files, and other material objects that have been captured by police officials executing searches or subpoenaed by state officials conducting investigations. Open sources include newspaper and magazine articles, radio and television reports, books, speeches, court proceedings, Congressional hearings, and other government documents available in the public domain (Abadinsky, 1997, p. 484; GAO, 1998, p. 7; GAO, 1984, p. 24; Loch Johnson, 2000, p. 2; Sims, 1995, p. 4).

Dozens of Colombian and U.S. law enforcement, military and intelligence agencies collect, produce, and analyze relevant information about Colombian narcotics organizations. Three separate directorates within the Colombian National Police (CNP) produce tactical, operational, and strategic intelligence: Anti-Narcotics, Intelligence, and the Judicial and Investigative Police. The Department of Administrative Security (DAS) and various branches of the Colombian Armed Forces, including the Army, Navy, Marine Infantry and Air Force, also perform intelligence functions. In recent years, Colombian law enforcement and military organizations have combined their drug intelligence resources through the Joint Intelligence Center. Twenty-two U.S. federal agencies are directly involved in collecting or manufacturing domestic and foreign drug enforcement intelligence. Table 6-2 summarizes these U.S. agencies, the type of intelligence they produce, and the domestic and foreign scope of their intelligence gathering activities.

The proliferation of agencies involved has led to the duplication of drug enforcement intelligence products. One General Accounting Office report found that four different counter-drug centers analyze air traffic data between Colombia and Mexico. The GAO also reported that six law enforcement and military organizations produce intelligence regarding drug trafficking along the southwest border of the U.S. Policy makers have addressed these concerns by implementing two changes to U.S. drug intelligence efforts. First, in 1988 lawmakers gave the Office of National Drug Control Policy the authority to establish intelligence priorities for the drug enforcement intelligence centers. Second, in 1993 the federal government created the National Drug Intelligence Center (NDIC) to serve as a centralized clearinghouse for strategic drug



Table 6-2 U.S. Drug Enforcement Intelligence Agencies,  
Types of Intelligence and Scope of Activities<sup>3</sup>

Agency (Cabinet level department/organization)	Tactical intelligence	Operational intelligence	Strategic intelligence	Domestic	Foreign
Drug Enforcement Administration (Justice)	X	X	X	X	X
El Paso Intelligence Center (Justice)	X	X	X	X	X
Federal Bureau of Investigation (Justice)	X	X	X	X	X
National Drug Intelligence Center (Justice)		X	X	X	X
Regional Information Sharing Systems Program (Justice)	X	X		X	X
Customs Service (Treasury)	X	X	X	X	
Customs Domestic Air Interdiction Coordination Center (Treasury)	X	X	X	X	
Financial Crimes Enforcement Network (Treasury)	X	X	X	X	X
Coast Guard (Transportation)	X	X	X	X	X
Central Intelligence Agency (Director of Central Intelligence)	X	X	X		X
Crime and Narcotics Center (Director of Central Intelligence)	X	X	X		X
Defense Intelligence Agency (Defense)	X	X	X		X
National Security Agency (Defense)	X	X	X		X
National Imagery & Mapping Agency (Defense)	X	X	X		X
Joint Interagency Task Force-East (Defense)	X	X			X
Joint Interagency Task Force-West (Defense)	X	X			X
Joint Interagency Task Force- South (Defense)	X	X			X
Joint Task Force Six (Defense)	X	X		X	
Office of Naval Intelligence (Defense)	X	X	X		X
Tactical Analysis Teams (Defense)	X	X			X
Bureau of Intelligence & Research (State)			X		X
High Intensity Drug Trafficking Areas Program (Office of National Drug Control Policy)	X	X	X	X	

Note: X indicates type of intelligence produced or range of foreign and domestic intelligence activities.

Source: General Accounting Office (1998).

<sup>3</sup> Absent from this list are a number of federal organizations that produce counter-narcotics intelligence as a byproduct of their primary mission, including the Border Patrol, the Bureau of Alcohol, Tobacco, and Firearms, the Bureau of Land Management, and the Federal Aviation Administration (GAO, 1998, pp. 5-6).

enforcement intelligence. With the creation of NDIC, policy makers reaffirmed the El Paso Intelligence Center's long-standing role as the primary provider of tactical and strategic drug intelligence (GAO, 1993, pp. 8-15; also, see GAO 1992).<sup>4</sup>

#### DEA's Role in Counter-Drug Intelligence

As the primary drug enforcement agency in the U.S. federal government, the DEA directs the production and dissemination of counter-narcotics intelligence. An Intelligence Division, headed by the Assistant Administrator for Intelligence, oversees the agency's intelligence activities. This division produces a variety of intelligence products for decision-makers, including strategic assessments of production and consumption trends and trafficking patterns, tactical and operational analyses of the structure and membership of transnational and domestic trafficking organizations, and financial reports on money-laundering techniques and the macroeconomic impact of the illicit drug trade. As of 1996, the Intelligence Division contained three offices and one center (see Figure 6-1 below).<sup>5</sup> The Office of Investigative Intelligence designs, organizes, and executes DEA investigative intelligence programs. This office includes separate cocaine and heroin investigative units responsible for identifying major criminal enterprises involved in the production, transportation, and distribution of these psychoactive drugs. The Office of Intelligence Liaison and Policy plans strategy and policy for DEA intelligence programs and coordinates their execution. The office includes Foreign Strategic Intelligence Units for Latin America, Europe, and Asia and

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<sup>4</sup> The effectiveness of the latter reform is questionable. Some observers suggest that the NDIC, located in out-of-the way Johnstown, PA, is more a creature of pork-barrel politics than drug enforcement needs. Others see NDIC as an inferior analog of the highly sophisticated El Paso Intelligence Center (EPIC).

<sup>5</sup> The following description and diagram are based on Richelson (1999). Because his discussion draws on primary documents that are several years old, including a 1996 memorandum from the DEA Administrator to the Assistant Administrator for the Intelligence Division, some of this information may be dated.

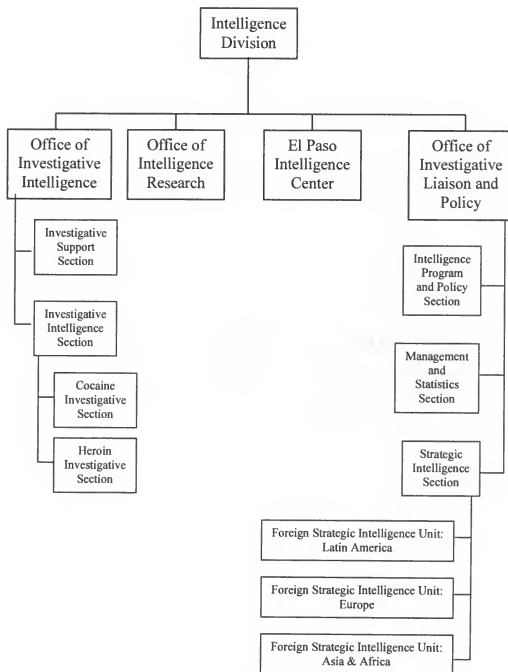


Figure 6-1 Organization of DEA Intelligence Division, circa 1996

Source: Adapted from Richelson (1999).

Africa that evaluate drug production, transportation systems, trafficking groups, and drug interdiction effectiveness in their respective areas. The Office of Intelligence Research

plans and implements DEA policies regarding the collection of drug enforcement intelligence. The El Paso Intelligence Center (EPIC) is a clearinghouse for tactical and operational intelligence that specializes in illicit drug movement throughout the world.<sup>6</sup> The Intelligence Division also includes a Special Field Intelligence Program that provides funding for the collection of specialized data on drug processing methods, transportation routes and methods, money-laundering techniques, and drug-related terrorism (GAO, 1993, 1998; Richelson, 1999, pp. 139-141).

### CNP Drug Enforcement Intelligence

Traditionally, the intelligence capabilities of Colombian law enforcement agencies have lagged far behind their U.S. counterparts. In the past U.S. officials have been reluctant to share information with their Colombian counterparts for fear that corruption would cause the intelligence to reach suspected traffickers. Today, bilateral intelligence sharing has improved considerably due to a more professional Colombian police force and a substantial effort by the CNP to upgrade its intelligence management systems, often with U.S. assistance. In 1993, the U.S. State Department reported that several CNP intelligence units had computerized their data collection and analysis systems and were becoming "increasingly effective" in producing reliable drug enforcement intelligence. Two years later, the CNP created a new directorate for intelligence that it housed in a state-of-the-art intelligence center located on the outskirts of Bogotá (BINM, 1993, p. 107; Nadelmann, 1993, p. 349).

The creation of the Intelligence Directorate and its \$20 million *Centro de Inteligencia* reflects a broader trend within the Colombian National Police to give greater emphasis to intelligence regarding specific threats to citizen security, such as drug

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<sup>6</sup> EPIC is described in greater detail below.

trafficking and terrorism. Today, Colombian law enforcement and military organizations receive and provide substantial time-sensitive intelligence. Colombian drug enforcement agencies exchange tactical, operational, and strategic intelligence with the DEA, the Central Intelligence Agency, the Federal Bureau of Investigations, the Bureau of International Narcotics and Law Enforcement Affairs, the Customs Service, two Joint Interagency Task Forces (South and East), and Tactical Analysis Teams. In recent years, much of this bilateral information exchange has occurred through the Information Analysis/Operations Center maintained at the U.S. Embassy in Bogotá, created to collect and process counter-drug intelligence in Colombia (GAO, 1999, pp. 134-135; Marshall, 1997, p. 68).

#### Gathering Intelligence through Criminal Investigations

In this section, I describe the practices and procedures drug enforcers use to develop tactical and operational intelligence targeting specific trafficking enterprises. Law enforcement agents draw on a variety of resources to conduct their criminal investigations, including confidential informants, surveillance, and undercover operations. They learn the practices and procedures of criminal investigation through training programs and practical experience.<sup>7</sup> Drug enforcement knowledge is codified in training manuals and textbooks, such as *The Narcotic Officer's Notebook* (Harney & Cross, 1973), the *Drug Enforcement Handbook* (DEA, 1987), and the *Aviation Drug Investigator's Guide* (FAA, 1989). These documents provide detailed instructions on specific investigative and enforcement routines, including conducting foot and vehicular surveillance, interviewing informants, and planning raids.

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<sup>7</sup> For example, DEA agents attend a 16-week instruction course at the Justice Training Center in Quantico, Virginia, where they receive "extensive training in all facets of drug law enforcement operations" (DEA, 2001b).

In the field, drug agents receive additional on-the-job training, supplementing their pedagogical knowledge with practical experience. On-the-job training can be provided formally through field training programs that include training and evaluation procedures, and informally when new recruits are paired with senior agents that socialize them to the norms and practices of everyday enforcement. Sources of practical knowledge for police officials include their own experience, obtained through the steady accumulation of day-to-day job performance, and the experiences of their colleagues, acquired through diffusion. Diffusion of experience among law enforcers can occur through formal mechanisms, such as police conferences and agency newsletters, and informal practices, including conversations and storytelling among colleagues that interact regularly.

### Criminal Informants

The most valuable source of human intelligence in many drug investigations are criminals and their associates, collectively referred to as criminal informants. While average citizens and fellow agents provide useful tactical intelligence to law enforcement officials, persons with detailed knowledge of specific criminal acts are often those that participate in these transactions. Investigations of particular individuals, groups or activities frequently commence with tips provided by criminal informants. One common drug enforcement technique is to apprehend "targets of opportunity," lower-level participants that face the greatest exposure to drug enforcement efforts, and pressure them to turn state's evidence against higher-ranking figures that subsequently become surveillance targets. Another practice is to recruit confidential informants by offering handsome rewards to persons that supply information leading to the arrest of high-level

traffickers. This practice has been pursued with some success in targeting the leaders of the Cali and Medellín core organizations in Colombia, allowing police investigators to penetrate their elaborate security structures (Reyes, 1999, p. 165; Serrano Cadena, 1999, p. 63).

### Surveillance and Undercover Operations

Drug enforcement agents also use surveillance and undercover operations to gather intelligence about trafficking and money-laundering activities. Surveillance refers to the clandestine observation of persons, vehicles, places or objects to obtain information on criminal activities or participants' identities. Undercover operations are a form of surveillance in which investigators or criminal informants assume false or misleading identities to acquire information. Investigators supplement physical surveillance and undercover operations with photographic and electronic surveillance equipment that intercepts communications among participants and records their illicit activities. When sufficient intelligence has been gathered to execute court-approved search warrants, police agents raid apartments, offices, and stash houses and capture incriminating documents, computer files, and other records of criminal activity. All of these documents and recordings contain useful information that can be exploited by criminal investigators and government prosecutors (Abadinsky, 1997, pp. 485-491; Furden, 2000; Levine, 1990; Marshall, 1999, p. 25; Marshall, 2001b; Nadelmann, 1993, pp. 207-210, 239; Nieves, 1997, p. 15; Westrate, 1994, p. 89).

Unfortunately for police officials, the amount of information gathered about Colombian trafficking enterprises through physical surveillance and undercover operations is often limited. Unlike street drug sales, most transactions involving

transportation, importation, and wholesale distribution occur in discreet locations, hidden from public view. Moreover, undercover agents are often unable to infiltrate upper management circles of transnational trafficking enterprises. This is due to the compartmentalized structure of these criminal operations, the generalized inaccessibility of non-family members or long-standing confidants to organization leaders, and legal constraints facing government agents. Examples of the latter include rules that prohibit undercover agents from consuming illicit drugs and oblige police officials to intercept known drug shipments before they reach illicit markets. While these limitations do not apply to confidential informants that occupy high-ranking positions within trafficking enterprises, such informants are few and far between. In cases where investigators have access to one or more high-level informants, such as the Operation Cornerstone investigation that immobilized several Cali-based core organizations, the impact can be devastating.

#### Manufacturing Drug Enforcement Intelligence

Counter-drug intelligence is not only be gathered but periodically evaluated, reported, and disseminated among relevant decision makers, including police officials, prosecutors, and policy makers. U.S. and Colombian drug enforcement and intelligence agencies manufacture a variety of classified and unclassified intelligence products for the law enforcement and policy-making communities, including annual drug threat assessments, organizational profiles of specific trafficking enterprises, country-oriented drug studies, and narcotics and geographic-specific trend publications. These documents contain operational and strategic intelligence about Colombian trafficking enterprises and the illicit drug industry in Colombia. Drug enforcement agencies also produce tactical



intelligence products, including link and telephone toll analyses of phone numbers and financial transactions, and post-seizure analyses of narcotics, documents, computer records, shipment containers, vehicles, and other equipment used by narcotics organizations. These records and reports allow police officials to identify active criminal enterprises and determine drug trafficking and money laundering trends. Collectively, they form part of the organizational memories maintained by U.S. and Colombian law enforcement agencies (Abadinsky 1997, p. 483; Furden, 2000; GAO, 1998, pp. 10-11).

The diffusion of intelligence among enforcement agencies is facilitated through the extensive use of computerized information management systems, such as the DEA's Narcotics and Dangerous Drugs Information System (NADDIS), and national clearinghouses for counter-narcotics intelligence, including the El Paso Intelligence Center (EPIC). NADDIS is a computerized file system housed at EPIC. As of 1998, NADDIS contained the summaries of federal, state, and local law enforcement reports on over 3,500,000 individuals, businesses, transportation vessels, and airfields identified through the DEA's investigative reporting system. EPIC is an interagency organization run by the DEA that centralizes the collection and dissemination of tactical-operational drug intelligence. EPIC provides "real time" tactical and operational intelligence on the movement of illicit drugs through land, sea, and air transportation routes in the Western Hemisphere. With twenty-five plus years of experience, along with the agency's practice of cooperating with law enforcement organizations in foreign countries, the DEA's drug intelligence information management systems are unparalleled (BINLEA, 1999; Constantine 1998; DEA, 2000; DEA, [no date] "El Paso Intelligence Center"; Frankel, 1997; GAO, 1993, pp. 11-13; GAO, 1998; GAO, 1999, p. 51; Nadelmann, 1993, pp. 207-

208; NDIC, 2001; ONDCP, 2001; Reuter *et al.*, 1988, p. 42; Richelson, 1999, pp. 142-143; Westrate, 1994, p. 83).

### From Intelligence to Operations

Law enforcement authorities in the U.S. and Colombia use intelligence to plan and carry out their everyday activities. As the director of the Florida Office of Drug Control points out, “we try to move from intelligence to operations. That is the purpose of developing an intelligence picture—to act on it” (McDonough, 2000, p. 218). To do so, drug enforcement units hold regular meetings during which managers and field agents analyze tactical and operational intelligence about specific criminal organizations, discuss the strengths and weaknesses of ongoing enforcement efforts, and plan upcoming operations. During an interview, the head of one DAS investigative unit described how his group met regularly to discuss specific tactical intelligence, such as the contents of an intercepted telephone call, and determine whether the information was sufficient to merit further investigation of the enterprise or plan another course of action (Furden, 2000).

“Once we terminate a case,” the official continued, “we have a meeting in which we all contribute information and we say, ‘Now we are going to work in this form,’ because we saw this” [criminal activity] (Furden, 2000, author’s translation). When asked whether the diffusion of case-specific information is limited to his unit, the official answered that he received tactical and operational intelligence regarding different criminal organizations from DAS units “all over the country and that we include in our knowledge” (Furden, 2000, author’s translation).

Drug enforcement units use intelligence to improve the quality of their investigative and enforcement activities. According to another DAS official, the head of the organization's anti-money laundering unit, the purpose of sharing intelligence:

is to improve the investigative form, so that we can better our investigations, to try to see how they [the *narcos*] are working with respect to topic XXX in money laundering and how we can help to counteract it. If we know that they are laundering the money in some form or other, then we can try to understand how to detect the money laundering operation in order to know what actions to take in that period to counteract the situation (Brandy, 2000, author's translation).

Officials from several different CNP units also stress the importance of holding regular meetings and conferences, both within their own agencies and with other drug enforcement agencies, to share intelligence, analyze activities and problems, and brainstorm improvements to existing operations. Organizational sensemaking appears to be a standard activity in Colombian drug enforcement, at least among the country's elite units (Aero, 2000; Bandera, 2000; Brandy, 2000; Gallego Castrillón, 2000; Herrera, 2000).

#### Changes in U.S. Drug Enforcement

Law enforcers attempt to reduce the supply of illicit psychoactive drugs to consumer markets by disrupting precursor chemical flows, destroying processing labs, intercepting refined drugs, raiding warehouses, confiscating profits, and capturing participants. Over the past several decades, U.S. and Colombian drug enforcement agencies have developed a variety of programs, strategies, and practices to carry out this task. Political pressure from government institutions and perceived changes in the international drug trade have led to a number of changes in these agencies and how they carry out their activities. Structural changes include the creation of new enforcement and intelligence organizations, the formation of new sub-units within existing agencies, and

alterations in decision-making hierarchies and communication flows. The DEA itself was the administrative stepchild of a series of reforms that sought to reduce fragmentation among federal drug enforcement agencies. Operational changes include procedural and technological innovations in investigative strategies and tactics to identify and dismantle trafficking enterprises.

The following pages analyze numerous structural and operational adaptations by U.S. and Colombian drug enforcement agencies. While some modifications have improved intelligence sharing, reduced bureaucratic infighting, and improved criminal investigative techniques, others have produced more ambiguous results. Irrespective of their implications for task performance, these changes were made as decision-makers in police organizations and policy making bodies gathered, analyzed, and applied knowledge and experience about drug enforcement, often in response to negative feedback. Although some of the adaptations described below did not affect drug enforcement policy in Colombia, they had a direct bearing on Colombian-based trafficking enterprises that operate in the U.S.

#### Structural Adaptation Case #1: Toward an Administrative Merger of the DEA and FBI

In the early 1980s, dissatisfaction among policy makers within the executive branch and Congress regarding the DEA generated substantial pressure for an administrative reorganization of federal counter-drug efforts. Created in 1973 by the Nixon administration, the DEA had failed to live up to its billing as the nation's "super" drug enforcement agency. Critics charged the agency did not effectively target major trafficking organizations, including the emergent core enterprises in Colombia, and

engaged in debilitating rivalries with the Customs Service, FBI, and CIA (Thornton, 1982; Tofani, 1985).

In 1982, Attorney General William French Smith announced an administrative reform giving the FBI "concurrent jurisdiction" for federal drug investigations. In practice this meant that the DEA now fell under the administrative control of the FBI. While, the DEA nominally remained the "lead agency" in federal drug enforcement, the FBI director now had the authority to appoint top-level DEA administrators and determine policies for hiring, training, and fiscal management. The first DEA Administrator to serve under the reorganization was a career FBI official who replaced the DEA's geographic organizational structure (*i.e.* South American division, European division, etc.) and with an FBI-inspired section orientation (*i.e.* heroin desk, cocaine desk, marijuana desk). The 1982 reform also mandated that the FBI direct its resources and expertise in the areas of electronic surveillance and financial investigations to assist the DEA's efforts to target major narcotics violators. As part of this effort, six hundred FBI agents were shifted to drug investigations (Levine, 1990, p. 78; Mullen, 1983, pp. 31-33; Nieves, 1997, p. 6; Thornton, 1982; Tofani, 1985; Wilson, 1989, p. 267).

Initially, the semi-merger produced what James Q. Wilson describes as a "profound culture shock" in the two agencies, as field agents and managers struggled to adapt to new decision-making hierarchies and routines. However, with the passage of time and the implementation of additional procedures and joint training programs, collaboration between the two enforcement organizations improved, leading Wilson to conclude his assessment on an optimistic note:

FBI training programs began to produce, even in the eyes of DEA veterans, better quality agents. The FBI administrators in turn began to loosen their tight central

controls in order to accommodate the realities of street-level enforcement. Promotion patterns changed so as to reward agents who participated in complex investigations that led to the prosecution of major drug conspiracies. At the local level, interagency committees were established to channel funds into promising investigations aimed at high-level dealers; the availability of the money enhanced agency cooperation in sharing information. The FBI's habits, experience, and technical equipment made it easier and more rewarding to use wiretaps for acquiring evidence. At the same time, the DEA's pool of drug informants remained a key resource that the FBI could not duplicate (Wilson, 1989, p. 267).

According to the former director of the DEA's Office of International Operations, the agency also emerged from the semi-merger better positioned to respond to the growth of the Colombian cocaine cartels. The drug-specific desk orientation mandated by the first post-reform Administrator produced a Cocaine Investigations Section that later became an effective mechanism for coordinating the DEA's numerous investigations of the core enterprises based in Medellín and Cali (Nieves, 1997, p. 6).

The extent to which the positive results of the 1982 reform were due to policy makers' ability to accurately diagnose the bureaucratic ills of federal drug enforcement is unclear. Wilson, for one, maintains that the success of the reorganization was more the result of a "happy accident" than "proper diagnosis" (Wilson, 1995, p. 30). Whether the fruits of policy makers' labors were intentional or accidental, it is apparent that power considerations *and* learning played a role in this structural adaptation. Initially, changes in the DEA were due to the imposed preferences of more powerful political actors, including executive branch policy makers and FBI administrators. However, following a period of aversion to an unwanted reforms, DEA managers and field agents gradually adapted to the new rules and procedures, drawing on the expertise of their fellow FBI agents and adjusting their daily enforcement activities accordingly. As this case indicates, even when organizational change is due to the imposition of a new set of

routines by a more powerful actor, this does not preclude learning occurring within the subordinate agency following a period of initial adjustment.

#### Other DEA Structural Adaptations

In addition to adapting to administrative reorganizations imposed by more powerful bureaucratic actors, the DEA creates new sub-units and programs in response to developments in the psychoactive drug industry. In response to the re-emergence of Caribbean trafficking routes used by Colombian smugglers, the DEA created a new Caribbean division. During the previous decade many trafficking groups abandoned these routes in response to intensified law enforcement efforts in the Caribbean. However, in the early 1990s trafficking enterprises based in the Colombia's Atlantic coast area took advantage of the shift in drug enforcement resources away from the Caribbean to re-activate their traditional routes through the Windward and Mona Passages. By 1995, the DEA was sufficiently alarmed by the "increasingly larger" psychoactive drug shipments passing through these routes that it established the 21<sup>st</sup> Field Division in San Juan, Puerto Rico (DEA, [no date] *DEA History, 1994 – 1998*).

The DEA established the Regional Enforcement Teams initiative in 1999 in response to another development in the illicit drug trade. In recent years, a number of major trafficking organizations have adapted to intensified drug enforcement efforts in major U.S. drug markets, such as New York and Miami, by shifting their distribution cells to smaller cities and rural areas, such as Charlotte, North Carolina and Des Moines, Iowa. Over time, several enterprises established cocaine, heroin, methamphetamine, and marijuana production centers in these areas, complete with their own command cells, warehouses, and transshipment points. Consistent with their design, these trafficking

centers overwhelmed the law enforcement capacities of local police officials. To respond to this strategic innovation by trafficking enterprises, the DEA established mobile Regional Enforcement Teams (RETs) that target major trafficking organizations operating in small towns and rural areas, "where there is a lack of sufficient drug enforcement resources." These highly trained, well-equipped units seek to "identify and dismantle" the trafficking enterprises before they become entrenched in these communities (Butterfield, 2002; DEA, 1999, pp. 53-54).

### Reforming the Colombian National Police

Colombian law enforcement agencies have also implemented a number of administrative reforms in recent decades with the purpose of modernizing bureaucratic hierarchies, improving task performance, and responding to changing patterns in criminal delinquency. Perhaps no law enforcement bureau has experienced greater structural change over the past forty years than the Colombian National Police. Since 1966, the CNP has experienced seven administrative reorganizations, including four since 1993. The first two reorganizations were designed to remove the CNP from the command of Colombia's armed forces and affirm its status as an independent bureau.<sup>8</sup> Subsequent reforms sought to modernize the agency's administrative structures, reduce human rights abuses and drug-related corruption, and improve service delivery. Frequently, changes in administrative structures and routines were made in response to political pressure from domestic and foreign sources.

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<sup>8</sup> In the first half of the 20<sup>th</sup> Century, Liberal and Conservative governments in Colombia politicized and corrupted the National Police by filling the rank and file with members of their own party whenever they assumed control of the national government. In 1951, the chief of the Colombia's armed forces, General Rojas Pinilla, who seized presidential power in 1953, incorporated the National Police under the direction of the General Command of the Colombian Armed Services (Torres Velasco, 1994, pp. 181-183).



### Structural Adaptation Case #2: Cultural Transformation of the CNP

Following a series of corruption and human rights scandals involving its officers in the 1980s and early 1990s, the Colombian National Police came under intense pressure from the Gaviria administration and civil society to undergo substantial reform. The immediate impetus for change was the rape and killing of a ten year-old girl *inside* a Bogotá police station in 1993. As public outrage over the gruesome crime mounted, the Gaviria administration formed two review commissions, one internal to the CNP, the other external, to study the institution and make policy recommendations. Following a year-long diagnostic process, in which top-level CNP administrators solicited feedback, including substantive criticisms and policy recommendations, the institution adopted a series of reforms beginning in 1993 and culminating in the *Transformación Cultural* of 1997. During this period a number of changes were made in the organization. Over eleven thousand police officers were dismissed for suspected human rights abuses and drug-related corruption. The discredited General Inspection office was temporarily replaced with an external civilian review commission that exercised oversight of CNP operations.<sup>9</sup> A new Intelligence Directorate was created and charged with the responsibility of increasing the scope and quality of the institution's drug enforcement intelligence. The cultural transformation policy sought to "flatten" decision-making hierarchies within the traditional military-style bureaucracy, allowing low-level managers and agents greater discretion in carrying out their activities (Leal Buitrago *et al.*, 1999, p. 83; Llorente, 1999, pp. 391, 407; Llorente, 2000; Puglisi, 2000; Soto Velasco, 2000; Serrano Cadena, 1999; Torres Velasco, 1994).

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<sup>9</sup> The General Inspection office was reinstated in 1995.

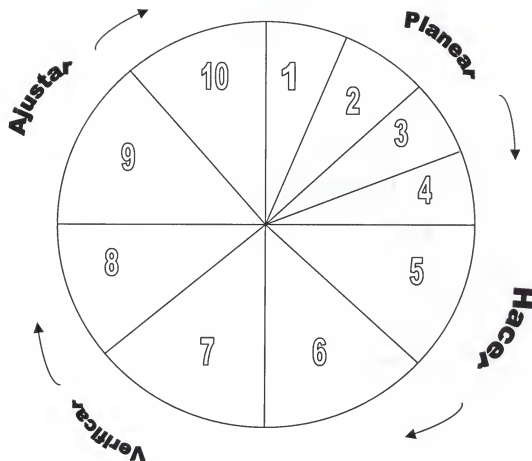


Figure 6-2 PHVA Management Cycle

**KEY:** Steps 1-4 correspond to plan (*planear*): (1) Initiate a new plan, (2) define & describe the process, (3) define the goals, (4) define the action plan. Steps 5 & 6 correspond to do (*hacer*): (5) Educate & train those responsible, (6) execute. Steps 7 & 8 correspond to verify (*verificar*): (7) verify, (8) control. Steps 9 & 10 correspond to adjust (*ajustar*): (9) analyze results, (10) analyze problems and identify corrective action.

*Sources:* Bandera (2000), CNP (1999), Pinellos (2000). Author's translation.

However, some of the most significant reforms involved the creation and implementation of new organizational routines. One performance program developed during this period was the PHVA management cycle; designed to help CNP managers improve their ability to plan and evaluate programs. The name of the program is an acronym based on the Spanish verbs for to plan, do, verify, and *adjust* (emphasis added). It includes procedures for identifying and analyzing problems, and creating action plans to correct them (see

Figure 6-2 below). Other routines put in place during this period sought to improve the selection and training of police recruits, and change the incentive structure for field agents by rewarding them for exemplary service (Bandera, 2000; Camacho Guizado, 1993; CNP, 1999; Leal Buitrago *et al.*, 1999, p. 83; Llorente, 1999, pp. 391, 407; Llorente, 2000; Puglisi, 2000; Serrano Cadena, 1999; Soto Velasco, 2000; Torres Velasco, 1994; WOLA, 1993, pp. 1, 35-36).

In the process of implementing these changes, the Colombian National Police transformed itself into one of the most respected institutions of the Colombian state. The accolades reached a highpoint in 1995 and 1996, when CNP drug enforcement units captured the Rodríguez Orejuela brothers and other leaders of the Cali core enterprises. The director of the institution and the reform effort, General Rosso Serrano, became an international celebrity, receiving extensive praise from U.S. and European law enforcers and politicians, and adoration from the Colombian press and populace. The institution he reformed became a model police force, hailed at international law enforcement conferences and studied by police organizations from other countries eager to learn the secrets of Serrano's success (Bandera, 2000; Camacho Guizado, 1993; CNP, 1999; CNP, 2001; CNP, [no date]; Leal Buitrago *et al.*, 1999, p. 83; Llorente, 1999, pp. 391, 407; Llorente, 2000; Puglisi, 2000; Rohter, 2000; Serrano Cadena, 1999; Soto Velasco, 2000; Torres Velasco, 1994; WOLA, 1993, pp. 1, 35-36).

To date, the results of the CNP's cultural transformation appear to be mixed. It is clear that some degree of organizational learning took place. Formal routines were changed, lines of authority altered, and new organizational sub-units created. These changes were made by CNP decision-makers that gathered and analyzed information

with an eye towards ensuring the survival of their institution in the face of an increasingly hostile environment (Soto Velasco, 2000). The temporal contiguity of the reforms and the capture of several Cali capos produced a remarkable public relations success, allowing General Serrano and other CNP leaders to claim that the drug enforcement operations were a result of changes made to the institution.

However, the degree to which the administrative reforms impacted the behavior of rank-and-file *patrulleros* (patrolmen) or improved service delivery remains unclear. Some evidence indicates that the implementation of critical reforms was superficial, with change restricted to top administrators. A critical intention of the cultural transformation was to flatten the CNP's "organic" structure and eliminate a long-standing management ethos characterized by "few thinkers and many doers" (Leal Buitrago *et al.*, 1999). Unfortunately, the CNP has been slow to decentralize due to resistance from high-ranking officials. Several years after the 1997 reorganization, institutional authority remains concentrated among upper-level administrators. Decisions and information continue to flow vertically, from the top down, rather than horizontally. Generals, colonels, and majors are now better trained in formulating strategic plans and measuring performance indicators, but these skills have not changed how *patrulleros* carry out their daily activities. Anecdotal data gleaned from interviews and readings suggests that CNP patrolmen continue to lack input into institutional decision-making processes (Leal Buitrago *et al.*, 1999; Llorente, 1999; Llorente, 2000).

While the cultural transformation demonstrated the CNP's ability to respond to a hostile environment, the learning process was restricted to upper echelon administrators. Formal routines changed, reflecting the decision-making authority of top officials.

However, the day-to-day informal practices and procedures of patrolmen apparently did not. In this case, organizational learning was circumscribed by the failure of the reforms to change the behavior of those that implement the bulk of the organization's service delivery.

### Adaptations in Drug Enforcement Operations

Although many of the basic tools of drug enforcement, including electronic surveillance, undercover operations and "controlled" transactions, have been around for decades, the investigative and enforcement strategies of the DEA and the CNP limited their effectiveness until the 1980s. Policy makers and police officials did not recognize that the disruption of Colombian trafficking enterprises required improved enforcement methods until they developed into sophisticated, high-volume drug networks.

### Banshee or Buy-Bust?

Operation Banshee offers a compelling case in point. In the early 1970s, the DEA and New York City Police combined resources to investigate what appeared to be a series of independent traffickers of Colombian origin operating in Manhattan and Queens. In gathering and analyzing tactical intelligence from court authorized wiretaps and participants that turned state's evidence, criminal investigators gradually pieced together the strands of a large transnational conspiracy. Operation Banshee eventually resulted in the arrest and conviction of over a dozen members from the Bravo smuggling network (see Chapter 2) (Hudson, 1974, pp. 1 & 18; Lubasch, 1976, p. 21; *New York Times*, 1976, p. 20). While the operation was considered a success in law enforcement circles, many DEA managers refrained from pursuing similar investigations. A former DEA official that participated in the original investigation explains why:

Operation Banshee had taken over a year to put together, involved large numbers of agents, and was costly in terms of man-hours, dollars expended, and investigative time. To many DEA managers, Operation Banshee was just the type of case that we should not be getting involved in. Consequently, cases of this type were discouraged (Nieves, 1997, p. 5).

At the time, most DEA investigations relied on the time-honored "buy-bust" technique in which undercover agents or criminal informants purchased minute quantities of illicit drugs from retailers who were then immediately arrested. Unlike the conspiracy investigations represented by Operation Banshee, buy-bust cases were resource-light and easy to execute. All that was required was identification of a low-level street dealer by drug enforcement agents, and a small amount of "flash" money to conduct the transaction. DEA promotion procedures enhanced the technique's attractiveness by rewarding field agents for "putting powder on the table" and people in jail. DEA managers could then aggregate arrest and seizure numbers in performance review reports that produced impressive-sounding outputs for policy makers.

However, as the federal government's super drug enforcement agency, the DEA's primary mission was to identify and apprehend *major* traffickers and dismantle their criminal operations. The buy-bust technique was ill suited for such efforts. Throughout the 1970s, the DEA and other enforcement organizations came under increasing criticism from the U.S. Congress and their own agencies for targeting too many low-level drug violators through buy-bust tactics. Critics pushed the DEA to abandon its "transactional" approach to drug enforcement and devote greater resources to conducting complex conspiracy investigations against national and transnational trafficking enterprises and

seize their illicit assets (GAO, 1979, pp. 85-86; GAO, 1984, pp. 24-25; Wilson, 1978, pp. 147-148).<sup>10</sup>

### Innovations in Conspiracy Investigations

By the early 1980s, the growth of the international drug trade and the presence of Colombian distribution groups in New York and Miami convinced the DEA and other law enforcement bureaucracies to take these criticisms to heart. Over the next decade, the DEA undertook a sustained effort to target major trafficking organizations through long-term conspiracy investigations, undercover operations, electronic surveillance technologies, and financial investigations. A number of adaptations in drug enforcement operations were made during these years, prompting one high-ranking DEA official to refer to the 1980s as a "laboratory for experimentation in international drug law enforcement" (Westrate, 1994, p. 86).

Table 6-3 DEA Domestic Arrests by Class Level,  
Fiscal Years 1979 and 1982

Class of Violator <sup>11</sup>	FY 1979	FY 1982	Percent change
I	1,005	1,340	+33
II	588	782	+33
III	4,915	6,618	+35
IV	3,831	3,443	-10
Totals	10,339	12,183	+18

<sup>10</sup> Conspiracy investigations target high-level drug violators, including organization leaders and cell managers. These high-ranking figures are more elusive because they insulate themselves from drug transactions by communicating through intermediaries and compartmentalizing their operations into quasi-autonomous cells (see Chapter 4). Conspiracy investigations seek to demonstrate a relationship between two or more individuals engaged in drug trafficking (or other criminal behavior), even if they never actually handle the merchandise (GAO, 1984, p. 24, fn. 1).

<sup>11</sup> At the time of this GAO study, the DEA used a classification system called the Geographic-Drug Enforcement Program (G-DEP) to categorize narcotics violators into four classes according to quantitative and qualitative indicators. The DEA considers class I and II violators to be "major" traffickers. Common roles performed by violators in these two classes include: "head of organization", narcotics "procurer", "wholesaler", money "launderer", and "financier." The DEA considers class III and IV violators to be lower-level participants. Common roles for these classes include "courier", "retailer", and "wholesaler" (for smaller quantities of narcotics). As the narcotics trade grew in the United States during the 1970s and 1980s, the DEA was forced to revise the G-DEP criteria, increasing both the amount of narcotics for violators in classes I, II, & III and the amount of time for which these substances are trafficked (GAO, 1984).

As early as 1982, the DEA appeared to be making progress in its efforts to target major drug traffickers and dismantle their criminal operations. A General Accounting Office (GAO) study published in 1984 presented data indicating that DEA agents were devoting greater resources to complex conspiracy cases and fewer resources to the traditional buy-bust enforcement technique. The GAO study also showed that by fiscal year 1982 agents were arresting more high-level drug violators (see Table 6-3 below), using more telephonic wiretaps (although information from criminal informants remained critical for initiating investigations), and seizing greater financial assets from trafficking organizations (GAO, 1984).

Throughout the latter half of the 1980s and into the 1990s, the DEA continued to target trafficking enterprises through greater use of electronic surveillance technologies. Agents developed the practice of using multiple telephone wiretaps covering different participants to gather tactical intelligence about the *modus operandi* of targeted enterprises. During the 1990s, the DEA's use of court authorized wiretaps increased further. The GAO recently reported that the number of electronic surveillance orders conducted by the DEA increased by 183% from FY 1990 to FY 1998; the number of telephones, pagers, and fax machines covered by these orders increased by 158% (see Table 6-4). In 1995, the DEA created a new program to help field agents develop conspiracy investigations by improving the use of wiretap technologies (GAO, 1999, p. 51).<sup>12</sup>

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<sup>12</sup> According to the GAO, the program is designed to help agents "focus their intercept operations on the best available targets, choose the best telephone numbers for intercept, correctly conduct the intercepts, make the best use of collected information, and make the most efficient use of transcribers and translators" (GAO, 1999, pp. 49-50).



Table 6-4 Number of DEA Electronic Surveillance Orders  
Conducted and Facilities Covered, FY 1990-1998

Fiscal Year	Surveillance orders	Facilities (telephones, pagers and fax machines) covered
1990	223	219
1991	256	311
1992	332	302
1993	320	320
1994	357	339
1995	330	284
1996	546	584
1997	592	544
1998	631	564

Source: GAO (1999).

### Innovations in Undercover Operations

During the past two decades the DEA has developed numerous innovations in its undercover operations and other enforcement programs.<sup>13</sup> The traditional undercover buy-bust routine has been amended in a variety of ways, allowing DEA agents to target upper-echelon traffickers more effectively. In one adaptation, “reverse undercover” stings, the role of the undercover agent is changed from a buyer to a supplier of illicit drugs. By posing as large-scale drug suppliers in numerous operations, agents have been able to arrange transactions with kingpin-level traffickers that rarely meet with new customers. Following negotiations over price and quantity, major traffickers have been arrested on charges of attempting to distribute narcotics and criminal conspiracy, and their vehicles, money, and other assets confiscated (Westrate, 1994, p. 89).

The reverse undercover sting proved so successful in apprehending higher-level figures and confiscating their assets that the routine was expanded and further modified

<sup>13</sup> The following paragraphs draw heavily on a study by David Westrate, a high-ranking DEA official that served separate stints as the Assistant Administrator for Operations and the Assistant Administrator for Intelligence. In the first position, Westrate was responsible for the DEA’s day-to-day activities, domestically and internationally. In the second position, he was in charge of worldwide DEA intelligence activities.

to exploit the tendency of many trafficking enterprises to out-source the provision of goods and services. Enforcement units posed as drug transporters and off-loaders, suppliers of precursor chemicals and other processing inputs, money launderers and financial advisors, and providers of airplanes, ships, automobiles, computers, generators, microwave ovens, and other mechanical equipment. Long-term reverse sting operations, including Operations Green Ice, Green Ice II, Grouper, Juno, Pisces, Polarcap, and Swordfish, dismantled numerous Colombian trafficking and money laundering enterprises and produced substantial policy outputs, including hundreds of arrests, thousands of kilos of illegal drugs, and millions of dollars in illicit profits (Clawson & Lee, 1996; DEA, 1999, [no date] *DEA History, 1994 – 1998*; Westrate, 1994, pp. 88-90).

In recent years, the DEA and the Customs Service also increased their use of “controlled delivery” routines in which detected drug shipments are allowed to proceed through international shipping routes to consumer markets. Drug enforcement agents closely monitor the shipments in order to identify and apprehend the maximum number of participants in the conspiracy. Following a number of successful operations based on the controlled delivery of marijuana, cocaine, and heroin shipments, the enforcement routine was expanded to include precursor chemicals, dirty money, and mechanical equipment. These routines have evolved into complex performance programs requiring detailed planning and coordination among numerous law enforcement agencies from different countries. Experimentation with controlled deliveries and undercover operations have allowed the DEA to improve its drug enforcement operations considerably since the 1970s (Westrate, 1994, p. 93).

Drug enforcement agencies change their programs and procedures in response to other organizations, including the illicit trafficking enterprises they seek to dismantle. The final two sections of this chapter examine how “narcs” and *narcos* learn from each other through repeated interactions.

### Competitive Learning Games

Trafficking enterprises and drug enforcement agencies have diametrically opposed aims. Trafficking organizations provide illegal drugs to markets. In so doing, they seek to evade or otherwise undermine government efforts to stop them. Drug enforcement agencies aim to identify and dismantle trafficking groups, thereby reducing illicit drug flows and raising their wholesale and retail prices. Given their conflicting, but interdependent, goals, these state and non-state organizations share common task environments.

They also share competitive learning ecologies. In carrying out their respective tasks they strive to learn from each other. To dismantle trafficking enterprises, drug enforcement agencies gather, analyze, and act on tactical intelligence regarding participants’ identities and the methods they use produce, transport, or distribute illicit drugs. To evade or undermine drug enforcement efforts, trafficking groups gather, analyze, and act on information about police agencies and the routines they use to entrap participants and intercept their communications. Within these learning ecologies, interactions between rivals can be described as competitive learning games.

The competitive learning game is a theoretical device to conceptualize interactions between drug enforcement agencies and trafficking enterprises.<sup>14</sup> These

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<sup>14</sup> The device draws on game theoretic concepts and language, sans the abstract mathematical apparatus. However, the framework is not premised on pure theories of rationality. In these contests, players are only

contests feature goal-oriented, rationally bounded players (*i.e.* narcs and *narcos*) that use different strategies to outwit their adversaries and attain organizational objectives.

Competitors engage in multiple interactions, endowing the contests with a repeated-play quality. Learning games feature multiple equilibria. Players seek to improve their positions by changing strategies and contests yield a variety of outcomes. Trafficking groups may partially or completely avoid drug enforcement efforts, or they may fall victim to surveillance and disruption. Drug enforcement agencies may partially or completely dismantle trafficking enterprises, or they may fail to identify participants.

Players understand the basic rules of competitive learning games, along their adversaries' and their own first order preferences or goals. Traffickers understand that their goals are to produce, transport, and/or distribute sufficient quantities of psychoactive drugs as to yield satisfactory inducements (see Chapter 4). Furthermore, they understand that these activities have been outlawed by nation-states, and that their environments contain dozens of drug enforcement agencies that seek to identify and dismantle them. Drug enforcers understand that their goals are to identify and dismantle trafficking enterprises. They are also aware that their adversaries know they exist and seek to evade or undermine their efforts. For both narcs and *narcos* these first-order preferences are stable. They do not change during the course of the game.

However, second-order preferences, which consist of the strategies players use to achieve their first-order preferences, are not fixed and may change throughout the game.

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intendedly rational, they lack access to perfect or complete information, and their second-order preferences change. Moreover, the unit of analysis in competitive learning games is the organization, not the individual, although I agree with Simon that a theoretical understanding of organizational behavior can be built on individualistic foundations. I present the competitive learning game as a metaphor for thinking about *narco*-narc interaction rather than a fully developed theory. In developing the framework, I have been influenced by Andreas (2000), Farkas (1998), Geddes (1995), Levitt & March (1988), Mares (1992), Moe (1984), Simon (1997), and Snidal (1986).

Indeed, as players interact and learn from each other, it is expected that their second-order preferences will change. At the commencement of learning games, players lack access to complete information about their competitors' second-order preferences. This is due to the clandestine nature of drug trafficking and drug enforcement. However, as learning games proceed players acquire information about their competitors' behavior through repeated interactions, and change their behavior accordingly.

Information is the lifeblood of competitive learning games. To be successful, players require knowledge about the second-order preferences of their adversaries. Moreover, they must prevent their opponents from acquiring knowledge about their own tactics and strategies. In *narco-narc* learning games, players engage in a variety of intelligence and counter-intelligence activities. Drug enforcement agencies gather tactical and strategic intelligence regarding specific trafficking enterprises through a variety of practices and procedures, including undercover operations and controlled deliveries. Trafficking enterprises draw on human, technological, and documentary sources to acquire intelligence about government counter-drug efforts. They monitor radio frequencies used by Customs officials and drug enforcement agents. They exploit the discovery process and the Freedom of Information Act to gather detailed information about criminal investigations. They hire attorneys to research the statutory limitations on specific drug enforcement practices, such as court-approved wiretaps (see Chapter 5).

To prevent the unwanted diffusion of information to competitors, narcs and *narcos* engage in counter-intelligence. Both sets of actors draw on a variety of practices and procedures to protect sensitive communications. They use code words and culturally-bound slang terminology to disguise the meaning of verbal communication and

written notations. They use encryption technology to shield information stored on computers and disseminated electronically. They limit intra-organization information flows about impending activities on a need-to-know basis. They use the media, criminal informants, and other sources of communication to spread disinformation about their adversaries and sow confusion and mistrust.

Competitive learning games proceed through a series of interlocked behaviors among players. One player's action evokes specific, even routine responses from adversaries, and vice versa (Weick, 1979). Players draw on their respective operational repertoires to achieve organizational objectives. Trafficking enterprises use practices and procedures for drug production, transportation, and distribution, and police agencies draw on different routines for carrying out criminal investigations and enforcement operations. As traffickers conduct repeated transactions in an inherently hostile task environment (see Chapter 4) they expose themselves to greater risk and uncertainty.

Through human or stochastic error, traffickers face the probability of an eventual mismatch. Drug enforcers may intercept their communications, interdict their drug shipments, and apprehend their participants. A mismatch for traffickers is an opportunity for their adversaries. Drug enforcers attempt to capitalize off these events by gathering more intelligence about traffickers and their methods of operation. When drug enforcers gather sufficient tactical intelligence they carry out enforcement operations against their opponents. If traffickers discover, through their own informants or poorly executed police work (such as a sloppy surveillance operation), that they are the subject of a criminal investigation they will change their activities to avoid further exposure to law enforcement. If law enforcers carry out a successful operation, some trafficking

enterprises will be immediately removed from the illicit drug industry, particularly those with few participants and a single dominating figure. Trafficking enterprises that survive a drug enforcement operation will be compelled to make additional changes or face eventual removal. When counter-drug activities cause a particular player to be selected out of the game, other parts of the transnational network or different criminal enterprises may still reap the benefits of the interaction through the diffusion of relevant knowledge among the remaining players.

In targeting additional trafficking groups, particularly those that have absorbed the lessons of previous interactions, drug enforcers are compelled to alter their enforcement tactics, but not necessarily their strategies. Change in tactics and mistakes by traffickers will lead to the identification and apprehension of other players that subsequently face the same change-removal decision point. In this manner, narcs and *narcos* adjust and re-adjust their activities as they interact repeatedly with each other. Over time, traffickers that fail to alter existing routines or create new ones in response to previous interactions are more likely to be selected out of the system. When this happens, other players emerge to capture to capture their share of psychoactive drug markets.

One consequence of competitive learning games is that players develop increasingly sophisticated strategies and practices as they seek to outwit their adversaries. Law enforcement success compels traffickers to come up with communication or transportation innovations that are not recognized by police agents. The use of Internet-based technologies and encryption software by trafficking groups developed in response to law enforcers' penetration of telephonic communications through wiretaps and other

intercept technologies. Conversely, trafficking success compels police agents to develop investigative and enforcement innovations that are unrecognized by criminal enterprises (Crank, 2000; Frechette, 1997). The use of reverse undercover stings by drug enforcement agencies developed in response to the tendency of high-level traffickers to insulate themselves from drug transactions. In this manner, players operations are likely to become increasingly sophisticated over time as they engage in repeated interactions.

However, this logic of escalation does not always obtain. When drug enforcement agencies succeed in dismantling a number of highly sophisticated trafficking organizations within a short period of time, as occurred during the crackdown on the Cali "cartel" in the mid-1990s, players that slip through the enforcement net may be precisely those that use low-tech practices and procedures in carrying out their criminal activities. These groups' use of more rudimentary communications and transportation technologies tends to work in their favor as drug enforcers continue to focus on more technologically sophisticated operations.<sup>15</sup>

#### Factors that Affect Outcomes in *Narco-Narc* Learning Games

Players that succeed in competitive learning games exhibit a range of adaptive behaviors. However, not all players learn with the same speed or precision. While all players confront environmental and organizational conditions that impede or facilitate their ability to respond to feedback, some face greater constraints than others. In *narco-narc* learning games, trafficking enterprises enjoy a number of advantages over their government adversaries, including a head start, clearer objectives, flatter decision-making hierarchies, and fewer legalistic and bureaucratic constraints to behavior. While these

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<sup>15</sup> On this point I take issue with Peter Andrea's insightful, if underdeveloped, analysis of border smuggling games between U.S. Border Patrol agents and Mexican smuggling enterprises. Andreas incorrectly assumes that border smuggling games inherently contain a logic of escalation (Andreas, 2000, pp. 95-96).



environmental and organizational conditions do not determine outcomes in competitive learning games, they do tilt the playing field in favor of criminal organizations. I analyze these factors below.

### Playing Catch Up

As competitive learning games commence, drug enforcers do not know the identities of specific trafficking enterprises, nor the practices and procedures they use to conduct their activities. This provides traffickers with a head start over their competitors. As long as they remain unidentified, traffickers can conduct their illicit operations free from penetration by drug enforcers. While traffickers may also be unaware of the identities and methods of police agencies, unlike their state adversaries they do not require this information to carry out their activities. This places drug enforcers at a distinct disadvantage vis-à-vis their illicit competitors. Police agents cannot penetrate the operations of unknown entities, nor can they easily manufacture intelligence about criminal acts prior to their commission. By nature most counter-drug intelligence is reactive, which means that narcs are generally a step, or more, behind *narcos*. When drug enforcers identify a “new” communication or transportation technique, adaptive trafficking enterprises have already moved onto to other routines. Drug enforcers seek to bridge the gap between their understanding of contemporary trafficking enterprises and what these non-state actors are actually doing. Sometimes they succeed. Witness the disruption of dozens of major Colombian trafficking enterprises in recent years. However, once these known enterprises are removed from the industry, drug enforcers again confront a host of criminal operations about which they know next to nothing. The quest for “real time” intelligence is a perennial challenge in drug enforcement. No matter

how well narcs play the game, they are always a step behind their adaptive counterparts (Brandy, 2000; Crank, 2000; Fernandez, 2000; Frechette, 1997; Gale & Rodríguez, 2000; Uribe Ramírez, 2000).

### The Survival Imperative

Outside of terrorism and warfare it is difficult to imagine a more hostile environment than the one shared by narcs and *narcos*. Drug enforcement agencies exist to dismantle trafficking enterprises, and traffickers only survive to the extent that they can avoid or undermine the state's intentions. Environmental hostility can impede or facilitate organizational learning (see Chapter 3). Hostility impedes learning by increasing stress and anxiety for decision-makers, causing them to ignore or misinterpret critical feedback. Hostility can also impede learning by inducing agents to make rapid, maladaptive responses to spur of the moment crises. However, hostility also facilitates learning by providing a clear and unambiguous signal: Change or die.

Task environments for trafficking enterprises are as hostile as any in the organizational world. Colombian trafficking groups face danger from competitors, suppliers, customers, and, of course, law enforcement agencies (see Chapter 4). They compete for market share and resources with hundreds of criminal enterprises, guerrilla groups, and paramilitary organizations within and outside of Colombia (Arreguin, 2000; Francis, 2000). With many of their opponents operating outside the rule of law, trafficking groups face intense competition. Competitors frequently use deceptive and violent means to defeat them. They are vulnerable to robbery from suppliers, customers, corrupt police officials, even their own participants. Facing potential deception and violence at every turn, traffickers must contend with enormous levels of stress.

Moreover, decision-makers must be able to distinguish signals from noise, discern truth from lies and hyperbole. These demands tax the cognitive abilities of even the most cool-headed decision-makers and make learning difficult.

When drug enforcers identify traffickers the environmental hostility they face increases exponentially. Drug enforcement task forces, elite units, and joint military-police operations are capable of exerting tremendous pressure on identified enterprises. When investigations move into full swing drug enforcement pressure becomes cascading. Initial raids and arrests lead to the discovery of information that leads to more operations producing more arrests that leads to more information leading to more raids, and so on. When the Colombian government directed its substantial drug enforcement capabilities, supplemented with DEA and CIA assistance, against the Medellín and Cali core organizations in the 1990s, extraordinary pressure was brought to bear on the leaders of these enterprises and their families. As the number of raids rose from the hundreds to the thousands, leaders were compelled to cease their trafficking activities and devote their resources to protecting themselves and their families. Their ability to respond effectively to the feverish crescendo of drug enforcement is limited, and it is usually only a question of time before their trafficking operations are significantly disrupted (Crank, 2000; Gale & Rodríguez, 2000; Montoya, 2000; Pineda, 2000; and Smith, 2000c).

However, the hostile environment confronting trafficking enterprises also facilitates learning. For traffickers the stakes in competitive learning games are high. Every lab destroyed, every shipment interdicted, every stash house raided, and every participant apprehended creates a potentially fatal vulnerability. This provides traffickers a paramount incentive to maintain operational secrecy and change their activities as

frequently and rapidly as circumstances warrant. The need to survive often overrides other factors that may impede learning in trafficking enterprises, including conflicting goals among participants and organizational inertia.

By contrast, survival for drug enforcers depends on their ability to secure sufficient budgetary allocations to carry out their programs and policies. While they have an incentive to produce satisfactory policy outputs to justify their mission and ensure additional funding, rarely do they face termination if they fail. Even if their performance indicators drop precipitously, the DEA and CNP are likely to receive adequate budgets. Indeed, their funding may actually increase if they can demonstrate that their poor performance is due to the strength of their illicit adversaries. While traffickers and drug enforcers operate in hostile environments, the latter do not face the same survival imperative that confronts their illicit adversaries. For traffickers the stakes of competitive learning games are higher

### The Enforcement Dilemma

Law enforcers have a symbiotic relationship with the traffickers they seek to dismantle. Drug enforcement organizations, such as the DEA and CNP, exist to identify, apprehend, and dismantle trafficking enterprises. If they somehow managed to eliminate all their criminal competitors and eradicate the illicit drug trade, drug enforcers would also remove their *raison d'état*. Without trafficking enterprises to disrupt, drug enforcement agencies have no reason to exist. This prospect may appear slim to some observers. International police organizations that operate in over fifty countries, such as the DEA, have little reason to worry about the complete demise of transnational trafficking. Even if one country wipes out the psychoactive drug industry within its

national borders, the history of international trade suggests that criminal enterprises in other countries are likely to step into the ensuing vacuum.

However, for territorially based law enforcement organizations, such as the Colombian National Police, this scenario may appear more plausible. If highly specialized CNP drug enforcement units are too successful and push the drug trade out of Colombia they are likely to lose funding, training, and other assistance as their own and the U.S. governments direct limited counter-drug resources elsewhere. This has already happened in Bolivia and Peru. During the 1990s, forcible eradication programs implemented by the Banzer and Fujimori administrations achieved considerable success in reducing the estimated production of coca leaf in both countries. During the same period illicit drug production increased dramatically in Colombia, compelling U.S. policy makers to reduce drug enforcement assistance to Bolivia and Peru and increase it to Colombia.

Drug enforcers in Colombia understand this dilemma and its implications for their professional activities. According to the director of the Intelligence Directorate of the Colombian National Police, the level of "tactical" *narco-narc* competition in Colombia is fierce, as drug enforcers strive to apprehend specific trafficking enterprises. However, the level of what he calls "strategic" competition for the Colombian and U.S. governments is less intense, and this has to do with higher-level bureaucratic and political considerations (Nicosia, 2000). Drug-related corruption further complicates the enforcement dilemma, as compromised officials lack the willingness to vigorously prosecute criminal enterprises they are paid to protect (Cook, 1997; Lupsha, 1996, p. 35). The crux of the enforcement dilemma is that it is not always in the best interest of law

enforcers to use the most effective counter-drug strategies. The dilemma fosters complacency and organizational inertia on the part of drug enforcement agencies, and provides an additional advantage to their illicit adversaries.<sup>16</sup>

### Smaller in Size, Flatter in Structure

Compared to drug enforcement bureaus, trafficking enterprises are relatively small and flat. Although considerable variety exists among different enterprises, in the post-cartel era many trafficking groups contain fewer than two dozen participants. Larger organizations that coordinate transnational networks contain fewer than a hundred participants, many of who participate in these operations on an *ad hoc* basis. Trafficking enterprises also contain few management layers. "Mom and pop" operations may feature only two levels of decision-making hierarchy: the boss and numerous subordinates. Even larger, more "bureaucratic" enterprises, such as the core organizations, generally contain no more than four management levels (see Chapter 4).

Federal drug enforcement agencies are larger and more bureaucratic. The DEA and CNP contain thousands of participants organized within numerous management levels. In fiscal year 2000, the Drug Enforcement Agency contained more than nine thousand employees, including over 4,500 Special Agents (see Table 6-5 below). In 1997, the Colombian National Police contained over ninety thousand uniformed officers, approximately two thousand of which worked in the Anti-Narcotics Directorate (Cook, 1997; Llorente, 1999, p. 470).

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<sup>16</sup> The drug enforcement dilemma also presents a principal-agent problem to politicians that oversee law enforcement bureaucracies. In this case, the interests of the agent (drug enforcement agencies) are not always consistent with the interests of the principal (politicians with oversight authority). Moreover, information asymmetry exists between the two actors, and it is difficult for the principal to acquire the accurate and reliable information from the agent regarding the latter's task performance. On the principal-agent problem, see Moe (1984).

Table 6-5 Authorized DEA Personnel, FY 2000

Personnel Type	Number
Special Agents	4,561
Diversion Investigators	523
Intelligence Specialists	686
Chemists	259
Professional/Administrative	1,323
Technical/Clerical	1,780
Total	9,132

Source: DEA, [no date] *DEA Staffing & Budget*

Officials within these drug enforcement agencies are organized into numerous layers of management. The top manager in the DEA is the Administrator, who oversees the entire agency, but, as noted earlier, reports to the FBI Director. Beneath the DEA Administrator is the Deputy Administrator. Below this office are a number of divisions, including the Operations Division, the Intelligence Division, and the Financial Management Division. An Assistant Administrator who oversees a number of offices leads each division. Each office is further broken down into sections with different areas of functional responsibility. The top management level in the Colombian National Police is the General Direction office, led by the Director of the agency. The CNP Director oversees the General Sub-direction office and several operational directorates, including Intelligence, Anti-Narcotics, and the Judicial Police. Each directorate is further broken down into a variety of offices and enforcement units (DEA, [no date] *DEA Organizational Chart*; Llorente 1999, p. 414).

These bureaucratic structures produce numerous management layers as each section and unit and is led by a different official. Within the DEA, a drug enforcement agent that works in the Cocaine Investigative Section (see Figure 6-1) reports to the head of this section, who reports to the head of the Investigative Intelligence Section, who reports to the head of the Office of Intelligence Investigation, who reports to the Assistant

Administrator for Intelligence, who reports to the Deputy Administrator, who reports to the Administrator. This trajectory contains seven levels of decision-making authority, from top to bottom. Figure 6-3 (see below) diagrams the convoluted, multi-layered structure. DEA foreign offices contain a similar bureaucratic structure. Special Agents report to one of four group leaders, who report to one of two Assistant Attachés, who report to the DEA Country Attaché, who reports to the Ambassador and the head of the South American Field Division (Pineda, 2000).

The contrast in size and management layers between drug enforcement agencies and trafficking enterprises has important implications for their competitive learning games. Recall from Chapter 4 that these implications stem from basic premises in organization theory. First, information and decisions travel faster when they flow through fewer processing channels. Second, at each processing channel information is susceptible to deliberate distortion, suppression, or misinterpretation. Therefore, the greater the channels, the greater the opportunities for the manipulation of data required for decision-making. On both these points, trafficking enterprises enjoy a critical advantage over their state competitors. With their small size and flat structures, trafficking groups tend to gather and process information more quickly than law enforcement agencies. With fewer channels for moving and processing information, decision-making cycles within trafficking enterprises tend to be faster than within law enforcement agencies. Information and decision flows within trafficking enterprises are also subject to fewer manipulation points.<sup>17</sup> With fewer opportunities for information distortion or suppression, decisions by entrepreneurs and upper-level managers are

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<sup>17</sup> However, there is nothing to suggest that the probability of information manipulation per channel is less in trafficking enterprises than law enforcement agencies.



quickly communicated throughout the enterprise. With quicker information flows and decision cycles, trafficking groups can also change their operational and procedural routines more quickly than law enforcement organizations.

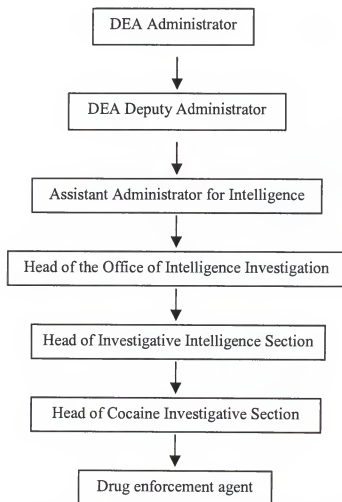


Figure 6-3 Example of DEA Management Levels

One DEA official with extensive experience investigating the Cali core organizations captures the advantage of quicker decision-making for trafficking enterprises:

With the decision process in the [trafficking] company, they can make this decision instantaneously and it will be translated in a day by everyone in the chain of command... It get transmitted immediately and some of the kingpins will literary jump into the equation... The kingpin can jump into the middle of it, immediately, and say, "Look guys, for the sake of business, for our own sake, this

is what we will be doing." We have seen them do that. For example, we used to hit them a lot on the AMTRAK, the train, because what they used to do in New York, they will take money, they will put in suitcases with wheels, and they will have old people bringing out their suitcases out, and no one would look at them. We actually popped some of these guys three and four times... and it took them like a day to make this adjustment, because [someone] down south got the call from an attorney, say in a particular state where we made one of the arrests, and we shared the information we have a narcotics trafficker jabbed in the middle because he just lost three or four million dollars in a day, and [the kingpin] said, "Look do not put your ass on a train. If anyone is on the train with my papers [money] [they] will be killed." End of the story. They cannot jump on the train. You cannot do that in traditional systems (Thompson, 2000).

Other U.S. and Colombian police officials interviewed also recognized that flatter decision-making hierarchies allow trafficking groups to respond to environmental change more quickly than drug enforcement bureaucracies (Evans, 1999; Gale & Rodríguez, 2000; Sanchez, 1999; Soto Velasco, 2000; Smith, 2000b; Thompson, 2000; also see "Statement of Witness," 1989, p. 30; Lupsha, 1996, p. 35).<sup>18</sup>

### The Red Tape Trap

Trafficking enterprises function outside the rule of law, law enforcement agencies within it. This distinction, eloquent in its simplicity, has significant repercussions for drug enforcers. Like other government organizations, police agencies are sovereignty-bound actors. They are constrained by legalistic and bureaucratic norms that their sovereignty-free adversaries lack. Their actions and performance outputs face the constant regulatory scrutiny of more powerful bureaucratic and political actors.<sup>19</sup> When

<sup>18</sup> Indeed, several law enforcement officials emphasized that their respective organizations were cognizant of this dilemma and taking corrective steps, including allowing field agents greater decision-making authority and forming special review boards to speed up information flows. Notwithstanding these changes, several officials concede that their criminal competitors maintain a critical advantage on this point (Pineda, 2000; Soto Velasco, 2000; Smith, 2000b).

<sup>19</sup> During separate research trips to Colombia, I became friendly with a contract employee of the State Department's Narcotics Assistance Section in the U.S. embassy in Bogotá. This person spent several years working within NAS, and he was highly regarded by the NAS director and several high-ranking CNP officials that I interviewed. During the course of our numerous informal conversations, my friend mentioned that Congressional and State Department review bodies were constantly inspecting NAS. He

carrying out their investigative and enforcement functions, they must abide by a series of legal and bureaucratic rules and procedures, and face consequences for the failure to do so.

To begin a criminal investigation, police officials must corroborate their “leads” and follow a set of procedures that protect the rights of innocent civilians. To obtain a court-authorized wiretap, drug enforcers must file documents with the court and complete other routines to prevent an abuse of state enforcement authority. To purchase equipment or technology, government officials must receive supervisory support and follow budget protocols. To conduct raids on properties of suspected traffickers, a government prosecutor must accompany enforcement units. To work with criminal informants, drug enforcers must first register them according a set of procedures. To carry out controlled deliveries law enforcers must inform their superiors when the targeted shipment is scheduled to arrive and interdict it before the drugs enter U.S. consumer markets. To prosecute alleged drug traffickers, government attorneys must share all relevant information about the criminal investigation with defense counsel. To dismiss drug enforcement agents that fail to achieve satisfactory performance, managers must follow procedures that, among other provisions, allow agents to appeal their termination (Brandy, 2000; Fernandez, 2000; Fuentes, 2000, p. 208; Gale & Rodríguez, 2000; Hinson, 1997; Lupsha, 1996, p. 35; Passas, 2000; Pineda, 2000; Soto Velasco, 2000; “Statement from Witness,” 1989, p. 32; Velásquez Romero, 2000a).

Trafficking enterprises lack equivalent constraints. When traffickers need a certain piece of equipment or material technology to conduct their criminal activities,

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complained that although NAS always passed the inspections “with flying colors,” they extracted organizational resources that could be used in more productive pursuits.

they simply go out and buy it (Passas, 2000; Pineda, 2000). When entrepreneurs or cell managers are dissatisfied with a worker's performance, the person is simply removed from the operation. When entrepreneurs require information about drug enforcement efforts they assign a participant or hire an outside consultant to acquire it. This is not to suggest that trafficking enterprises are disorganized anarchies, whose members lack rules, roles, and procedures to guide them. Indeed, Chapter 4 contains an extended discussion of the numerous routines trafficking enterprises use to structure participants' behavior. However, these rules and procedures are more informal and less onerous than those regulating drug enforcers. Moreover, unlike their law enforcement adversaries, trafficking groups do not answer to a higher bureaucratic authority. The kingpin's decision is law it does not have to be cleared with a contingent of organization lawyers to confirm its legality.

The red tape trap confers three distinct advantages on trafficking enterprises in their competitive learning games with police organizations. First, by slowing information and decision flows in drug enforcement agencies, these legalistic and bureaucratic constraints prevent them from responding as quickly to environmental change as their illicit competitors. Second, by prohibiting government officials from violating citizen's rights, legalistic constraints prevent drug enforcers from engaging in certain practices that may otherwise be highly effective in identifying and apprehending traffickers.<sup>20</sup> Third, to protect citizens' rights and hold police organizations accountable for their actions, bureaucratic and legalistic constraints increase the transparency of drug enforcement

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<sup>20</sup> This does not mean that violations of citizens' rights do not occur. This study documents examples of such violations.

efforts, allowing trafficking enterprises to gather information about these activities. One high-ranking DEA official elaborates on the last point:

it is more difficult for us [law enforcers] to learn from them [traffickers] than for them to learn from us... Because everything we do is above board, everything we do is done legally, we do it and it is exposed, it is discovered in court, and that is the law and they have rights and... essentially that is the way the game is played, thank God, that is what democracy is all about, the rule of law, due process and everything, and it is satisfying to know that we comply with the rules and we adhere to their rights, and we still win on occasion, and that is the stuff we seize and the people we arrest, we do not seize and we do not arrest, and we do not know how many tons are out there getting by us because they have this greater insight, because we do things above water... they are very covert in their activities, we are covert in our activities to try to penetrate them but this must be over eventually to put them in jail and court and that is our exposure (Fernandez, 2000).

Under the U.S. legal system, the same norms that protect the rights of alleged traffickers force drug enforcement agencies to expose the details of their criminal investigative techniques to the information sharing process known as discovery. As discussed in Chapter 5, a number of Colombian trafficking enterprises have manipulated discovery to gather information about drug enforcement efforts and change their transportation and distribution practices accordingly.

Some observers may counter that law enforcers 'violations of citizens' rights and the prevalence of drug-related corruption mollify the practical implications of the red tape trap. It is indisputable that corruption and human rights violations continue to undermine the integrity and efficacy of drug enforcement. Many U.S. and Colombian law enforcement agencies contain at least a few corrupt participants. However, as formal organizations their task is to uphold the rule of law rather than break it. Managers and participants that repeatedly fail to abide by the corresponding bureaucratic constraints can be held accountable for their actions and face a variety of disciplinary and legal

sanctions. Consequently, drug enforcement agencies are largely constrained by the legalistic and bureaucratic constraints contained in the red tape trap.

### Conclusion

Drug enforcement organizations learn. Whether in response to feedback from more powerful political and bureaucratic actors, or perceived changes in the illicit drug industry, police agencies in Colombia and the U.S. gather, interpret, and apply knowledge and experience to their activities. Lessons from experience are encoded in routines that guide criminal investigations and drug enforcement operations. Over the last twenty years, law enforcers have developed a number of undercover innovations, including reverse stings and controlled deliveries, allowing them to better target major trafficking organizations. Today, Colombian and U.S. narcs are more proficient in carrying out conspiracy investigations, using electronic surveillance technologies, conducting undercover operations, and tracing illicit drug and money flows across national borders than they were in decades past.

Like the criminal enterprises they seek to dismantle, drug enforcement agencies learn through repeated interactions with actors that share their task environment, including trafficking organizations. The concept of competitive learning games describes how sets of interlocked, rationally bounded players seek to outwit their adversaries by gathering, analyzing, and acting on intelligence to change their practices and procedures. The concept also suggests that traffickers enjoy a number of advantages over their state competitors. From the start of these contests law enforcers struggle to catch-up with traffickers due to the clandestine nature of drug smuggling and the reactive nature of drug enforcement. Trafficking enterprises fuel their initial advantage with faster decision

cycles. With fewer information processing channels, they can change their routines in response to feedback more quickly than drug enforcers. Traffickers also lack the myriad of bureaucratic protocols and regulations that slow the action response rates of drug enforcement agencies. Moreover, unlike their government competitors, traffickers have a clear and compelling reason to adapt their routines when necessary. Their survival as organizations depends on it. In contrast, drug enforcers are not always best served by enacting the most effective counter-drug strategies. Without traffickers to battle, they have no reason to exist. The drug enforcement dilemma fosters inertia on the part of drug enforcement agencies, and provides an additional advantage to their criminal adversaries.

The cumulative effect of these advantages suggest that drug traffickers will continue to experience success in even the most hostile law enforcement environments, such as the United States. Even when law enforcers succeed in dismantling certain enterprises, other players will emerge, driven by a desire to reap the substantial profits in the transnational drug trade. This suggests important lessons for state counter-drug policies that privilege law enforcement efforts. The analysis also suggests an alternative course of state action, one that requires substantial double-loop learning on the part of political elites and policy makers. These lessons and alternatives are examined in the concluding chapter of this study.

## CHAPTER 7 CONCLUSION

Over the past several decades the governments of Colombia and the United States have adopted a series of drug control policies they would have done better to avoid. Known collectively as “supply-reduction” these programs seek to increase the costs of psychoactive drug consumption in the U.S. by reducing their supply. Applied to Colombian trafficking enterprises, supply-reduction programs interdict drug flows, destroy processing labs, intercept communications, confiscate profits, and apprehend and incarcerate participants. In the U.S. the approach targets criminal enterprises in wholesale and retail markets, along with millions of consumers that have the temerity, or ill fortune, to procure controlled substances under the watchful eyes of the state.

The supply-reduction approach to drug control is unlikely to yield satisfactory policy outcomes. While social commentators have leveled a number of criticisms against supply-reduction policies, my focus here is on the criminal organizations targeted by these efforts. Building on the findings from this comparative study of organizational learning by trafficking enterprises and government drug enforcement agencies, I argue that supply-reduction is likely to fail because the former adapt their tactics and strategies faster and more thoroughly than drug enforcers can counter them. As long as these criminal enterprises are capable of learning from experience and information, and as long as drug revenues remain robust, they are likely to continue their illegal activities. However, I also maintain that policy makers and drug enforcers can undertake a variety



of reforms that would increase their ability to target and apprehend major trafficking enterprises.

### What Have We Learned?

This is a study about organizational learning. Learning by the “good guys,” the drug enforcement narcs that identify, apprehend, and dismantle trafficking networks; and learning by the “bad guys,” the *narcos* that manufacture, transport, and distribute psychoactive drugs in the U.S. and Colombia. In preceding chapters, I demonstrate how these state and non-state actors learn. The theoretical framework for this endeavor comes from a multidisciplinary body of literature on organizational learning. In Chapter 2, I draw on a number of theoretical studies, and the broader literature on organization analysis, to develop a routine-based, process-oriented notion of learning. According to this formulation, organizations learn when their participants gather, interpret, and apply information by changing practices, procedures, and performance programs that guide collective behavior. While individuals perform the cognitive labors of learning, this process is greater than the sum of participants’ information processing activities. Learning is not “organizational” until knowledge is distributed in collective memories and embedded in organizational routines. Information may be disseminated through written manuals, accounting logs, and computer files, or it may be transmitted through conversations, stories, and myths that participants use to construct inter-subjective understandings of organizational norms and practices.

Much of the empirical work in the learning literature, such as it is, deals with legally sanctioned organizations, including business firms and government bureaucracies. Given the dearth of studies on criminal enterprises, it is reasonable to question whether

this body of literature, developed to understand formal organizations, is applicable to collective forms that produce, transport, and distribute psychoactive drugs in Colombia and the U.S. In Chapter 4, I establish the validity of learning theory to Colombian trafficking enterprises by examining how they function as social organizations. These target-oriented entities provide illicit goods to achieve satisfactory profits and other benefits. To minimize their exposure to hostile task environments, they contain flat decision-making hierarchies, compartmentalized cells, and complex performance programs. While participants make valuable contributions to trafficking enterprises they also represent a source of great risk and uncertainty. Leaders attempt to reduce these risks by monitoring and controlling participants through intricate routines and constant communication. Participants draw on a number of material and symbolic technologies to conduct their criminal activities. The practical, as opposed to scientific, nature of most trafficking technologies facilitates their diffusion amongst a wide number of individuals and organizations.

If Chapter 4 establishes that many Colombian trafficking groups contain the constitutive elements of social organizations, Chapter 2 indicates that the psychoactive drug industry is a bubbling, seething cauldron of motion, oxidation, and regeneration. Change is a permanent fixture in an industry where the only certainty is uncertainty. Over the past decades Colombian narcotics organizations have undergone many changes. In the process, they have evolved from sporadic smugglers of European produced narcotics to leading global producers and transporters of cocaine and heroin. The state's role in this progression cannot be denied. For many years, the governments of Colombia and the United States downplayed, denied, and disregarded the growth of trafficking

enterprises in Colombia. By the time both governments declared war on drugs, the proliferation of trafficking technologies was already widespread in Colombia. As state officials mobilized and drug enforcers cracked down, many organizations were identified and dismantled. While law enforcement operations against the Medellín and Cali cartels disrupted the drug trade in Colombia, surviving groups proved more than capable of continuing the country's illegal smuggling tradition.

The robustness of the Colombian drug trade in the face of intensified law enforcement speaks to the adaptability and resilience of the collective forms that coordinate it. Chapter 5 examines how these enterprises change their operating methods and organizational structures in response to feedback. Participants in trafficking organizations routinely gather, interpret, and apply information to practices and procedures in order to improve task performance and reduce uncertainty and risk. They interact experimentally with their environment, using a variety of tactics and strategies, selecting those that improve performance and disregarding those that do not. Trafficking enterprises have developed a number of innovations in drug processing, transportation, distribution, communication, and money laundering technologies. Some of these tactical and strategic adaptations have allowed them to reduce the threat of exposure to drug enforcers, while others, such as certain processing routines, have increased their productivity.

When organizations alter existing routines or create new ones, they expand their operational repertoires, providing leaders and participants with a greater range of practices and procedures to draw on when conducting their illicit activities. Information contained in these routines may be recorded in manuals and computer files, or it may be

communicated informally among conspirators through conversations and meetings. The diffusion of knowledge and experience regarding trafficking technologies is not necessarily restricted to members of the same enterprise. In this context, organizational learning is often inter-organizational, as knowledge spreads across criminal firms through participants that share social networks. Venues that facilitate network learning include social gatherings and prison.

However, not all trafficking organizations learn. Participants operate under conditions of profound uncertainty. They struggle to make sense of ambiguous experience. They are prone to biases when interpreting feedback, and they make decisions based on incomplete and inaccurate information. The need to maintain secrecy about their illegal activities further impedes learning. Practices and procedures designed to protect core technologies from exploitation by drug enforcers and illicit competitors, such as compartmentalized cell structures, restrict communication flows, reducing participants' ability to gather information from other parts of the enterprise. The use of code words and aliases fosters frequent miscommunication among participants as they seek to make sense of ambiguous situations. The lack of formal organizational memories leads to the loss of organizational knowledge and expertise, particularly when participant turnover is high. In light of these various impediments, it is not surprising that many trafficking enterprises fail to adjust their tactical and strategic routines as needed. The intensity of drug enforcement efforts in recent years has increased the costs of this failure. Weak adapters are selected out of the Colombian psychoactive drug trade relatively quickly, leaving behind enterprises with values, structures, and practices conducive to tactical and strategic learning.

As Chapter 6 makes clear, trafficking enterprises are not the only learners of interest in this study. Similar to the *narcos* they seek to dismantle, law enforcement “narcos” acquire, interpret, and apply knowledge and experience to their activities. Drug enforcement agencies draw on a variety of investigative practices and procedures to gather information about trafficking enterprises and the illicit drug trade. This tactical, operational, and strategic intelligence is analyzed, reported, and disseminated among police officials, prosecutors, and policy makers. Drug enforcers in Colombia and the U.S. use this knowledge to plan and carry out their everyday activities. Moreover, developments in the Colombian drug trade and pressure from other government institutions have led drug enforcers to make a number of structural and operational adaptations. Structural adaptations include the creation of new enforcement organizations, such as the DEA, and the formation of new sub-units within existing agencies. Operational adaptations include innovations in investigative routines, such as reverse undercover stings and controlled deliveries. One outcome of these structural and operational adaptations is that drug enforcers have improved their ability to target major trafficking organizations through complex conspiracy investigations, electronic surveillance technologies, undercover operations, and financial investigations.

However, organizational learning by U.S. and Colombian drug enforcement agencies has failed to yield satisfactory policy outcomes. Colombian trafficking enterprises continue to produce and transport greater quantities of psychoactive drugs than ever before. To explain this dilemma, Chapter 6 offers the concept of competitive learning games, a metaphorical device to describe the accumulation of knowledge and experience among drug enforcers and drug traffickers as they engage in repeated

interactions. In these contests, these diametrically opposed, rationally bounded players seek to outwit each other and attain organizational objectives. Players attempt to acquire knowledge about their adversaries' strategies and tactics, while preventing their opponents from doing the same. Games proceed through a series of interlocked behaviors as each player's action evokes specific responses from its competitors. Players that survive repeated interactions develop diverse operational repertoires as they counter the adaptations of their adversaries. Over time, players become increasingly sophisticated in their ability to develop and choose from a greater range of performance programs.

A crucial factor in determining outcomes in these contests regards each player's ability to respond rapidly to feedback. The player with the faster decision cycle often wins. Due to a variety of organizational and environmental conditions, including flatter decision-making hierarchies, fewer legalistic and bureaucratic constraints to action, and an unambiguous incentive structure, most trafficking enterprises have faster decision cycles than drug enforcement agencies, suggesting that they will often win these contests. When drug enforcers win, as they sometimes do, and specific trafficking enterprises are removed from the game, other criminal players process the lessons of the game through the diffusion of relevant knowledge among remaining, interconnected players.

#### Alternative Explanations of Routine Change

Learning is not the only source of change in trafficking enterprises and drug enforcement agencies. Power and environmental selection also produce modifications in organizational routines. However, as seen in several of the empirical examples cited in this research, alternative sources of routine change are not mutually exclusive. In some

cases, power and environmental selection may provide the stimulus for participants to engage in organizational learning.

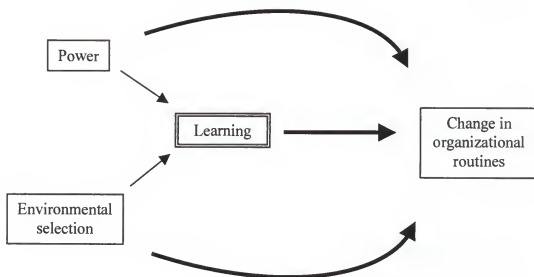


Figure 7-1 Sources of Change in Organizational Routines, Amended

On several occasions, U.S. drug enforcement agencies have proven vulnerable to the preferences of more powerful political and bureaucratic actors. In 1968 and 1973, federal drug enforcement agencies underwent two major administrative reorganizations, culminating in the creation of the Drug Enforcement Administration. The implementation of these reforms was due to the intervention of policy makers in the White House and the U.S. Congress, rather than information gathering and interpretation by drug enforcers. Dissatisfied with federal counter-drug efforts, more powerful bureaucratic actors sought to impose their views of drug enforcement on police officials. Ultimately, both reforms failed to produce the desired objectives, in part, due to a lack of learning by drug enforcers. The two major bureaucratic agencies impacted by the

reforms, the DEA and the Customs Service, continued to engage in the kind of debilitating inter-agency rivalry the reforms were designed to prevent.

Nine years after the creation of the DEA, frustration with federal drug enforcement efforts led policy makers to implement another administrative reorganization, the FBI-DEA semi-merger in 1982 discussed in Chapter 6. Again, more powerful political and bureaucratic actors imposed the reform from above. However, this reform differed from earlier efforts in one significant respect: drug enforcers learned. Following a period of aversion to the semi-merger, DEA managers and field agents gradually adapted to the new rules and procedures, improving their ability to target major trafficking organizations. The experience of the semi-merger suggests that power does not necessarily preclude learning. Even when more powerful external actors impose routines, participants within the targeted agency may accept the changes and modify their behavior accordingly.

Over the years, a number of changes in the illicit drug industry have been due to selection pressures rather than organizational learning.<sup>1</sup> Trafficking enterprises operate in extremely hostile environments characterized by a variety of legal and illegal competitors, including drug enforcement agencies that seek to dismantle them. Trafficking groups that fail to adjust to the vicissitudes of drug enforcement are often selected out of the illicit drug industry. During periods of sufficiently vigorous drug enforcement, some criminal enterprises are favored over others. The ability of trafficking organizations to survive government crackdowns may have more to do with existing practices and structures than their ability to alter routines in response to feedback. Some

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<sup>1</sup> Note that consideration of environmental selection requires that I change the level of analysis from the individual firm to the industry as a whole.



enterprises survive drug enforcement pressure due their connections to influential public officials. This, in part, explains the ability of the Cali cartels to elude drug enforcers during the periodic crackdowns of the 1980s, which were aimed at their more prominent, and violent, competitors from Medellín.

Alternatively, the small size of some enterprises allows them to slip through enforcement nets focused on the largest trafficking conspiracies. Environmental selection helps account for the decentralization of the Colombian drug trade during the late 1990s. After Colombian and U.S. drug enforcers dismantled the Cali cartels and other core organizations, surviving enterprises tended to be smaller, flatter, and more circumspect in carrying out their activities. Enforcement pressure did not cause these groups to change their practices and procedures, rather it made them more common by selecting the largest organizations out of the system. To this extent, environmental selection rather than adaptation accounts for change in the post-cartel drug industry. However, according to officials interviewed in this research, it is also true that groups that survived the crackdowns, including former remnants of the cocaine cartels, learned from this experience that they were better off coordinating their illicit activities through smaller, loosely coupled, *ad hoc* operations (see Chapter 5).

Learning and environmental selection are not mutually exclusive. Organizations that survive intensified drug enforcement contain structures and behaviors more conducive to environmental hostility. Over time, these attributes pass to other enterprises that seek to establish themselves in the illicit drug industry. Newly emergent enterprises may draw on surviving groups for inspiration, in which case they seek to pattern their structures after the attributes of the organizational model. Or they may develop similar

structures on their own, drawing on the experience of enterprise participants. Whether the source of inspiration is internal or external, these organizations change existing routines or create new ones by gathering, interpreting, and applying knowledge and experience. In other words, they learn.

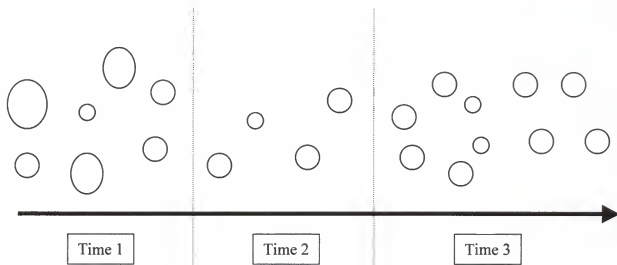


Figure 7-2 Phased Evolution of Illicit Drug Industry

**KEY:** In Time 1 environmental hostility increases dramatically as drug enforcers remove the largest trafficking enterprises from the system. In Time 2, smaller, *ad hoc* enterprises are the only survivors from the government crackdown. In Time 3 a rejuvenated drug industry develops as other enterprises form, modeling themselves after the attributes of the small survivors or drawing on their own experience.

Implications for Counter-Drug Policy:  
Or How I Learned to Stop Worrying and Love the Drug Trade

As far as interdiction, we are following the basic procedures we followed for the last 10 years. We are following the basic procedures that I found so easy to beat. Nobody has made the changes that need to be made in order to beat the problem ("Statement of Witness," 1989, p. 15).

In 1989, Max Mermelstein, the coordinator of a Medellín-affiliated transportation ring, made this comment while testifying before the U.S. House Subcommittee on Financial Institutions. Twelve years later Mermelstein's observation remains prescient.

Today the governments of Colombia and the United States persist in their quest to stamp out the drug trade through supply-reduction policies. These efforts continue to privilege punitive enforcement programs designed to reduce psychoactive drug consumption by increasing the risks of transacting in these illicit commodities, as well as the costs of consuming them. While state authorities have learned, much of it has been at the level of tactical routines. Over the past decades, drug enforcement agencies have developed reverse undercover stings and controlled deliveries, made better use of electronic surveillance technologies, and improved their ability to track transnational flows of drugs and money. In making effective use of such innovations police agents today are more proficient at investigating and incarcerating major narcotics traffickers and disrupting their illicit operations. However, the more drug enforcers' tactics change, the more their strategies remain the same. The basic approach to drug enforcement remains identical to the strategy criticized by Mermelstein. The tactics may be harder to beat, but there is no shortage of people willing to try.

The basic finding of this research is that drug enforcement is doomed to failure because the people willing to try change their practices and procedures faster than the state can accommodate. Quicker decision cycles, fewer impediments to action, and clear incentive structures give *narcos* the edge in their repeated encounters with the state. Even when drug enforcers demolish major trafficking organizations, other groups pick up where their predecessors left off. This is due to the widespread diffusion of trafficking technologies and other requisite inputs, and the continued profitability of transacting in controlled substances.

A significant case in point regards the metamorphosis of the Colombian drug trade in recent years. Following the break-up of several core organizations, hundreds of small, low profile operations continued their activities, in the process increasing the supply of cocaine and heroin coming out of Colombia. Whether their presence is due to environmental selection or adaptation, these enterprises draw on the mistakes of their predecessors while exploiting advances in communications and transportation technologies. To the chagrin of law enforcement officials, they have proven increasingly difficult to identify and disrupt, impeding the state's ability to reduce illicit drug flows. Many trafficking groups today are simply unknown to intelligence officials either because they are new to the trade or because their leaders recently rose from the murky ranks of mid-level drug management. When drug enforcers achieve success, the damage is generally limited to minor enterprises specializing in single production activities. These diminutive groups are even more easily replaced than the core enterprises.

Colombian and U.S. drug enforcement agencies now find themselves victimized by their own success. After removing the largest, most visible organizations from the Colombian narcotics industry, they are left with hundreds of small, obscure, yet reasonably sophisticated groups about which they know next to nothing. The ability of these enterprises to adapt their organizational structures in response to past government anti-drug efforts explains, in large measure, the resilience of Colombia's contemporary narcotics industry. Whether represented by a handful of core enterprises or hundreds of independent firms, Colombia appears poised to maintain its prominent position in the international drug trade well into the new millennium.

### Diffusion of Trafficking Technologies

Meanwhile, the spread of knowledge and experience regarding drug trafficking continues apace throughout Colombia and the United States. This is due to a number of factors analyzed in this research, including contraband smuggling traditions, the practical orientation of most trafficking knowledge, and the creation of epistemic trafficking communities by supply-reduction policies that incarcerate large numbers of participants.

Contraband smuggling traditions in Colombia and the U.S. foster the diffusion of values, norms, and skills associated with drug trafficking. This research does not establish a causal relationship between Colombia's long-standing smuggling traditions and the growth of the country's psychoactive drug industry. However, over the last several decades it has become apparent that many contraband smugglers draw on their knowledge and skills when expanding into psychoactive drugs. The Colombian and U.S. governments facilitate this process with policies that encourage illegal trade in legal commodities, such as sugar, cigarettes, and emeralds, by entrepreneurs hoping to avoid prohibitive tariffs and restrictive quotas.

The practical, as opposed to the scientific, knowledge involved in drug trafficking means that these symbolic technologies can be acquired by many participants at a relatively low cost. One does not need to go to graduate school to learn how to smuggle psychoactive drugs (just to learn about learning to smuggle drugs). Common sense, a decent memory, and some on-the-job training suffice for most participants. However, if participants do receive advanced training in narcotics trafficking, their knowledge and skills increase correspondingly. Supply-reduction policies that emphasize incarceration have created hundreds of institutions of higher learning or, more accurately, epistemic

communities of jailed participants that socialize with fellow traffickers, share knowledge and experience, and develop new and improved practices and procedures for conducting their illegal activities. Incarcerating participants has the (presumably) unintended effect of producing more sophisticated drug traffickers.

### What is to be Done?

The scenario depicted in these pages is pessimistic. The supply-reduction approach to drug control is unlikely to yield satisfactory policy outcomes, in part, because the flat and fluid enterprises targeted by these efforts will continue to outwit their slower, more bureaucratic state adversaries. Yet, pessimism need not descend into despair. While there are no silver bullet solutions to the drug dilemma, policy makers have a range of options at their disposal, some more feasible than others. These include legalization, harm reduction, and amending drug enforcement bureaucracies. The first two prescriptions address the demand-side of counter-narcotics policy; I address these only sparingly. This is due to the orientation of the study rather than any presumption that demand factors are less important to drug control than supply considerations. Indeed, a comprehensive approach to narcotics control includes demand and supply reduction components, along with ample resources for research. However, because most of my analysis in the preceding chapters centers on the dilemma of supply-reduction, it seems pertinent that I direct my policy recommendations to this area. The recommendations that follow are based on the assumption that drug enforcement, for better or worse, will continue to be an essential component of U.S. and Colombian counter-narcotics efforts in the near future.

### Legalization and Harm Reduction

Dissatisfaction with drug prohibition has prompted a growing number of detractors to support alternative drug control strategies, including harm reduction and legalization.<sup>2</sup> Proponents of these two approaches view the illicit drug traffic as primarily a public health problem, rather than a law enforcement dilemma. Proponents of both also emphasize the harms caused by drug enforcement, such as the incarceration of large numbers of citizens for relatively minor drug-related infractions, and call for greater support of demand-reduction programs, including prevention education and treatment for substance abusers. Apart from these similarities, there are relevant distinctions between the two approaches.

One difference involves the question of legalization. Unlike their fellow critics, many, but not all, proponents of harm reduction do not favor legalizing controlled substances. Proponents of legalization argue that removing the legal sanctions to these commodities will significantly lower prices and thereby reduce the incidence of certain types of drug-related criminality, such as property crime and petty theft by addicts struggling to support costly habits. Some proponents also maintain that legalization will assist "producer" countries such as Colombia by allowing these economic activities to proceed according to the whims of the market place, rather than the violent interventions of the state. It is also believed that the level of organized crime in producer countries, along with drug-related corruption of public officials, will decline as trafficking enterprises are pushed out of the industry by more efficient firms and legality, along with

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<sup>2</sup> There are a variety of harm reduction and legalization approaches. At the risk of oversimplifying, I limit my discussion to these broad, and commonly accepted, categories. For discussion of harm reduction and legalization, see Bertram *et al.* (1996), MacCoun & Reuter (2001), and Nadelmann (1998).

access to state sponsored arbitration mechanisms such as the courts, reduces incentives to regulate transactions through coercion and violence.

It is plausible that legalization would reduce prices as well as certain types of drug-related crime in producer and consumer countries. This is because drug prices, in part, are a function of their illegal status, due to the high risks incurred by suppliers (Reuter *et al.*, 1988; Thoumi, 1995). However, this research suggests that legalization is unlikely to reduce levels of organized criminality in Colombia, or elsewhere. Similar to *contrabandistas* in the 1970s that expanded to marijuana and cocaine markets, many contemporary trafficking enterprises are likely to adapt a legalized drug industry by expanding into other areas of criminal behavior, including motor vehicle theft, armed robbery, kidnapping, and other types of contraband smuggling. In Colombia, there is sufficient demand for these activities to support hundreds of criminal organizations. Although data are scarce, there are indications that certain cities, such as Medellín, witnessed an expansion in non-drug-related organized criminality, including armed robbery and murder-for-hire, following the break-up of the cocaine cartels in the 1990s. According to a senior advisor to the Colombian president for crime and terrorism control, the Colombian police have identified organized bands of bank robbers that previously had been involved in drug trafficking. Confronting the necessity of maintaining their economic livelihood and the limited applicability of their knowledge and experience, these groups have willingly expanded into new areas of delinquent behavior.<sup>3</sup> The advisor explains:

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<sup>3</sup> Something similar occurred in the United States following the repeal of the Eighteenth Amendment in 1933. Criminal organizations that expanded during the period of alcohol prohibition did not collapse from its repeal. Instead, they diversified into other activities, including gambling, prostitution, and loan sharking.



They [drug traffickers] are not going to return to selling sweets in the street, they are people that don't know anything else, violent people, people that probably have [criminal] proceedings with the law, that have many enemies, so they can't just go out and do things publicly. The option they choose is the one of crime (Francisco, 2000, author's translation).

The value of legalization and harm reduction approaches to drug control is the emphasis they place on reducing drug enforcement harms and giving greater priority to demand-reduction activities. However, neither approach offers much useful guidance to policy makers regarding effective supply-reduction strategies. Advocates of harm reduction stress the need to de-emphasize, but not eliminate, drug enforcement. Even if one accepts this claim, as I do, the approach has little to say about making drug enforcement efforts more effective. The assumption that legalization will benefit producer countries and reduce organized crime is questionable. While harm reduction and legalization may be justifiable on several grounds, such as the individual's right to consume psychoactive substances that in certain respects are less harmful than alcohol or nicotine and the reduction of the societal harms associated with drug enforcement, policy makers will have to look elsewhere for suggestions on how to improve the effectiveness of supply reduction programs.

### A Modest Proposal

To the extent that the persistence of the drug dilemma lies in the advantages trafficking enterprises enjoy over their state adversaries, then policy makers should strive to level the playing field of competitive learning games. The first step in this process is to make the narcs more like *narcos* by removing the bureaucracy from drug enforcement. This would require flattening decision-making hierarchies in drug enforcement agencies, giving special agents greater discretion in carrying out their activities, and removing all

possible bureaucratic and legalistic constraints to action. In other words, drug enforcement agencies, or at least select units, should function more like the fluid, *ad hoc* networks they are designed to dismantle. The units should be designed to accelerate information flows, shorten decision cycles, and reduce bureaucratic protocols, improving their ability to respond rapidly to trafficking enterprises. However, in making these modifications, policy makers should preserve drug enforcers' advantages over their illicit rivals in the critical areas of training, intelligence, and material assets.

A number of specific improvements are feasible. Elite drug enforcement units in Colombia and the U.S. should be smaller and flatter than existing agencies. Units should contain fewer than two dozen participants and no more than three layers of management (manager, assistant managers, field agents). They should direct their activities towards investigations of specific enterprises. Yet, they should avoid diluting their resources by undertaking only one or two major investigations at a time. In recognition of the transnational, polydrug character of many trafficking enterprises, units should be organized on a regional, rather than a drug-specific, basis. Each region should contain several independent units, with the exact number depending on existing trafficking patterns. Administrative management and oversight of the units should be directed from a single, centralized location, rather than separate regional divisions. Individual units should enjoy unfettered access to the computerized intelligence databases, electronic surveillance technologies, satellite imagery systems, and other technological resources needed to conduct even the most complex conspiracy investigations. Units should function as semi-autonomous agencies but they should have the flexibility to outsource

the provision of necessary material and symbolic inputs to other government and private organizations on an *ad hoc* basis.

In recognition of the decentralization of the Colombian drug trade, elite units should focus their activities on disrupting networks, rather than individual organizations, even large ones. Units should have the autonomy to pursue their investigations wherever they may lead, including corrupt U.S. and Colombian officials that provide protection to criminal organizations. Units should be free to pursue their investigations across local, national, even regional law enforcement jurisdictions when necessary. However, units should cooperate with local and regional law enforcement agencies. To encourage cooperation, high-level administrators should publicly credit local and regional agencies with all enforcement outputs that result from specific investigations. In general, elite units will maintain low operational profiles and refrain from publicizing their activities in the media.

Policy makers should strive to minimize the disruptive impact of personnel turnover, and the corresponding loss of organizational knowledge, by placing field agents in elite units for a period of five years. The annual rotation of one-fifth of unit agents will facilitate the infusion of fresh knowledge on a regular basis. Members of the elite units should undergo rigorous selection and vetting procedures, including computerized background checks and periodic polygraph and urinalysis exams. Educational requirements should include a college degree at the bachelor's level, or its equivalent. If selected for participation, members should receive formal training in all areas of drug enforcement and additional on-the-job training once they join their units.

Elite units should include both drug enforcement agents and intelligence analysts. However, both types of participants should receive sufficient training in each area. When conducting investigations agents and analysts should closely coordinate their activities. Intelligence analysts should accompany enforcement specialists on all raids and begin gathering and processing information on site. With the assistance of computer-mediated technologies, analysts should integrate field data with the organizational memories maintained at headquarters. Analysts and agents should take a broad view towards intelligence gathering, extrapolating information even from seemingly innocuous sources, such as the personal libraries of suspected traffickers. The retrieval of tactical and operational intelligence should be a priority in all enforcement activities. Units should carefully study their criminal adversaries and pay close attention to their sources of knowledge and experience.

For these elite units to achieve maximum success in disrupting trafficking networks it is critical that their agents enjoy substantial operational discretion and not be overburdened by the need to follow myriad organizational procedures. Agents should have the authority to conduct repeated transactions with criminal enterprises, without conducting any enforcement activities, until they have infiltrated the entire network. Undercover agents should be allowed to engage in minor infractions, such as consuming psychoactive drugs, in order to earn the trust of unsuspecting targets. However, care must be taken to protect the rights of civilians and perpetrators. Drug enforcement units that trample on the rule of law defeat the purpose for which they were created.

Of course, the focus on elite drug enforcement units is not new. Over the past several decades, the DEA and CNP have created a number of elite units and task forces to

combat major narcotics organizations. In the 1970s, the DEA created the CENTAC program composed of quasi-autonomous drug enforcement units that conducted conspiracy investigations of, as one observer notes, "the biggest of the big-time" trafficking enterprises (Glionna, 1986). In the 1980s and 1990s, the CNP established rural and urban elite units that sprayed illicit drug plantings, destroyed processing laboratories, interdicted precursor chemicals, raided properties, seized drugs, confiscated assets, and apprehended the leaders of the cocaine cartels. In recent years, the two agencies have collaborated to create four CNP Special Investigative Units (SIUs) that focus on drug trafficking, money laundering, and the supply of precursor chemicals. Participants in the program undergo a rigorous screening process that includes computerized background investigations, security questionnaires, background interviews, medical and psychological testing, polygraph examinations, and urinalysis testing. Successfully "vetted" recruits attend a four-to-five week training course in the U.S. and receive ongoing training when they return to Colombia to join their units. SIUs have access to sophisticated weaponry, electronic surveillance equipment, and transportation and communications technologies (BINM, 1988, p. 89; BINM, 1991, p. 97; Camacho Leyva, 1993, p. 263; CNP, 2000, p. 365; GAO, 1999, pp. 56, 58; Nadelmann, 1993, p. 291-292).

The failure of these elite units to reduce aggregate drug production levels speaks to the difficulty of the task and the limits of the reform efforts. For all their emphasis on recruitment, vetting procedures, and training programs, the bureaucracies that created them ultimately bound these DEA and CNP units. Within the units, flows of information remained subject to taller (and slower) decision-making hierarchies of the bureaucracy,

and the operational autonomy of field agents was constrained by administrative oversight and institutional procedures. Elite units were also hampered by the vagaries of bureaucratic politics. CENTAC, the program that most closely approximates the recommendations outlined above, was eventually disbanded in spite of achieving substantial policy outputs, in part, due to the resistance of DEA regional directors that resented the program's intrusion into their jurisdictions and drain on common resources (drug agents, buy-bust money). In Colombia, State Department and DEA officials have been compelled to protect elite units from the countervailing interests of corrupt political elites (GAO, 1980; Mills, 1986; Nadelmann, 1993; Wilson, 1978).

As these examples indicate, the reforms outlined above are unlikely to succeed unless elite units are given considerable autonomy from drug enforcement bureaucracies and compromised officials. The extent to which this is possible remains an open question.

### Conclusion

In the summer of 1997, the highest-ranking DEA official in Colombia pointed out that his agency's goal was to drive the illicit drug trade out of Colombia into other countries where trafficking enterprises were less sophisticated and easier to identify and dismantle (Lyons, 1997). Several years later, as I finish this study, this goal remains elusive. Contrary to this official's prediction, drug trafficking has not been driven out of Colombia. Instead, drug production levels have increased as trafficking enterprises continue to adapt to drug enforcement policies and programs. This official was aware that trafficking organizations adapt their activities in response to government counter-narcotics policies and programs. Indeed, we discussed it at length during his interview.

In spite of his knowledge, he failed to fully appreciate the implications of organizational learning on his agency's efforts to disrupt these criminal enterprises. In the concluding chapter to this study, I have discussed a number of possible improvements that could be made to existing drug enforcement programs. However, it could be that the best drug enforcers can hope for is to increase their policy outputs, while ultimately failing to yield satisfactory outcomes. Instead of destroying the Colombian drug industry, drug enforcement initiatives will continue to create a hostile environment in which trafficking enterprises must adapt their tactical and strategic routines in order to survive. As long as the international traffic in controlled substances remains profitable, criminal enterprises based in Colombia will organize to benefit from this lucrative commerce.

APPENDIX A  
RESPONDENT DATA

Name of respondent	Date of interview	Type of respondent	Trafficker learning?: Affirmative, negative, not discussed	State learning?: Affirmative, negative, not discussed
Bruce Bagley	8/5/99	U.S. academic	Affirmative	Not discussed
Ivelaw Griffith	8/4/99	U.S. academic	Affirmative	Not discussed
Renssalaer Lee	7/20/99	U.S. academic	Affirmative	Not discussed
Julian Arturo	10/28/99	Colombian academic	Affirmative	Not discussed
Álvaro Camacho	3/6/00	Colombian academic	Affirmative	Not discussed
Fernando Cubides	4/6/00	Colombian academic	Affirmative	Not discussed
Maria Victoria Llorente	6/8/00	Colombian academic	Not discussed	Affirmative
Andrés López Restrepo	2/28/00	Colombian academic	Negative	Not discussed
Bernardo Parra	4/9/00	Colombian academic	Negative	Not discussed
Eduardo Sáenz	3/31/00	Colombian academic	Not discussed	Not discussed
Francisco Thoumi	7/19/99	Colombian academic	Affirmative	Not discussed
Álvaro Valencia Tovar	2/17/99 4/27/00	Colombian academic, retired general	Affirmative	Affirmative
Sergio Uribe Ramírez	3/7/00	Colombian researcher	Affirmative	Not discussed
Ricardo Vargas Meza	3/24/00	Colombian researcher	Negative	Not discussed
Carlos Velásquez Romero	5/1/00; 7/15/00	Colombian research, retired government official	Strong affirmative	Not discussed
Ricardo Calderón	7/1/00	Colombian journalist	Affirmative	Not discussed



Name of respondent	Date of interview	Type of respondent	Trafficker learning?: Affirmative, negative, not discussed	State learning?: Affirmative, negative, not discussed
Fabio Castillo	3/3/00, 3/8/00	Colombian journalist	Affirmative	Not discussed
José Gregorio Pérez Valdès	6/5/00, 7/16/00	Colombian journalist	Affirmative	Not discussed
Gerardo Reyes	5/25/00	Colombian journalist	Affirmative	Not discussed
Edgár Torres	6/15/00	Colombian journalist	Affirmative	Not discussed
Douglas Farah	8/29/99	U.S. journalist	Affirmative	Not discussed
Tim Johnson	3/7/00	U.S. journalist	Affirmative	Not discussed
Jorge Aero [pseud]	3/21/00	Colombian government	Affirmative	Affirmative
Edgár Barrero [pseud]	4/3/00	Colombian government	Not discussed	Affirmative
Alma Berquist [pseud]	3/22/00	Colombian government	Affirmative	Not discussed
Guillermo Brandy [pseud]	5/2/00	Colombian government	Affirmative	Affirmative
Jonathan Cook [pseud]	6/18/97	Colombian government	Affirmative	Not discussed
José Furden [pseud]	6/2/00	Colombian government	Affirmative	Affirmative
Gonzalo de Francisco	6/8/00	Colombian government	Affirmative	Not discussed
Lanny Gale [pseud] & Helmer Rodríguez [pseud]	6/6/00	Colombian government	Affirmative	Affirmative
Leonardo Gallego Castrillón	3/21/00	Colombian government	Affirmative	Affirmative
Homero Herrera [pseud]	7/14/00	Colombian government	Not discussed	Not discussed
María Janeway [pseud]	6/22/00	Colombian government	Affirmative	Not discussed
Joaquín Linville [pseud]	4/7/00, 4/18/00	Colombian government	Affirmative	Not discussed
Antonio Lupallo [pseud]	7/11/00	Colombian government	Affirmative	Affirmative
Adriana Mendoza	7/22/99	Colombian government	Affirmative	Not discussed
Gabriel Merchán	4/6/00	Colombian government	Affirmative	Not discussed

Name of respondent	Date of interview	Type of respondent	Trafficker learning?: Affirmative, negative, not discussed	State learning?: Affirmative, negative, not discussed
Juan Molano [pseud]	7/21/00	Colombian government	Affirmative	Affirmative
Carlos Montoya [pseud]	4/4/00	Colombian government	Affirmative	Affirmative
Pedro Morales [pseud]	7/11/00	Colombian government	Affirmative	Not discussed
Eduardo Nicosá [pseud]	6/14/00	Colombian government	Affirmative	Not discussed
Luís Oporto [pseud]	5/3/00	Colombian government	Affirmative	Affirmative
Antonia Puglisi [pseud]	7/4/00	Colombian government	Not discussed	Affirmative
Andrés Soto Velasquez	6/27/00	Colombian government	Not discussed	Affirmative
Nelson Vargas [pseud]	7/13/00	Colombian government	Affirmative	Not discussed
Paula Villega [pseud]	3/3/00	Colombian government	Affirmative	Not discussed
Leo Arreguin	6/5/00	U.S. government	Affirmative	Affirmative
Thomas Cash	8/3/99	U.S. government	Affirmative	Not discussed
Avrum Bird [pseud]	5/2/00 & 5/8/00	U.S. government	Affirmative	Not discussed
Jerome Crank [pseud]	3/15/00	U.S. government	Affirmative	Affirmative
Frank Derian [pseud]	7/23/99	U.S. government	Affirmative	Not discussed
Samuel Evans [pseud]	7/22/99	U.S. government	Affirmative	Not discussed
John Francis [pseud]	6/5/00	U.S. government	Affirmative	Affirmative
Myles Frechette	6/25/97	U.S. government	Affirmative	Affirmative
John Fernandez	1/27/00	U.S. government	Affirmative	Affirmative
Marvin Hatch [pseud]	3/1/00	U.S. government	Affirmative	Not discussed
Sherman Hinson	7/3/97	U.S. government	Affirmative	Affirmative
Larry Lyons	6/12/97	U.S. government	Affirmative	Not discussed
Katherine McNamara [pseud]	7/19/00	U.S. government	Affirmative	Not discussed
Luís Moreno	6/17/97	U.S. government	Affirmative	Affirmative
Jeremy Nolan [pseud]	6/12/97	U.S. government	Affirmative	Not discussed

Name of respondent	Date of interview	Type of respondent	Trafficker learning?: Affirmative, negative, not discussed	State learning?: Affirmative, negative, not discussed
William J. Olson	7/20/99	U.S. government	Affirmative	Not discussed
Monica Passas [pseud]	3/9/00	U.S. government	Affirmative	Not discussed
Ignacio Pineda [pseud]	4/13/00	U.S. government	Affirmative	Affirmative
Rafael Perl	7/22/99	U.S. government	Affirmative	Not discussed
Miguel Restrepo [pseud]	6/28/00	U.S. government	Affirmative	Not discussed
Thomas Sanchez [pseud]	7/22/99	U.S. government	Affirmative	Not discussed
Joseph Smith [pseud]	3/3/00 3/15/00 4/13/00	U.S. government	Affirmative	Affirmative
Jack Thompson [pseud]	2/15/00	U.S. government	Affirmative	Not discussed
Sidney Zabłudoff	7/19/99	U.S. government (retired)	Affirmative	Not discussed
Klaus Nyholm	3/31/00	United Nations	Affirmative	Affirmative
Carlos [pseud]	4/5/00	Direct participant	Affirmative	Not discussed
Emil [pseud]	9/19/00	Direct participant	Affirmative	Not discussed
Homero [pseud]	9/19/00	Direct participant	Affirmative	Affirmative
Néstor [pseud]	9/19/00	Direct participant	Affirmative	Not discussed
Jorge Valdés	8/29/00	Direct participant	Affirmative	Not discussed

## APPENDIX B QUESTIONNAIRE

Interview conducted by Michael Kenney, University of Florida

Respondent \_\_\_\_\_  
Job title \_\_\_\_\_  
Date \_\_\_\_\_  
Location \_\_\_\_\_

Informed Consent: You have been asked to participate in a semi-structured interview. I am a graduate student at the University of Florida, and I am conducting research on the Colombian drug trade and government counter-narcotics efforts. The objective of this study is to determine if Colombian drug trafficking enterprises learn from government drug enforcement efforts. The interview contains a series of questions relating to the research. Your participation in this study is completely voluntary. You are free to refuse to answer any or all questions. With your permission, I would like to audio tape the interview.

INTRODUCTION: Please tell me a little about your professional background

### CURRENT STATE OF INDUSTRY/ORGANIZATIONS

1. How would you describe the current state of the illegal drug industry in Colombia?
2. How would you describe the enterprises that manage the production and distribution of cocaine and heroin in Colombia?
3. Are these enterprises organizations (hierarchical chain-of-command, roles for members, rules that guide behavior) or networks (decentralized, not hierarchic, fluid networks of individuals loosely connected by their criminal activities)? Do these enterprises possess a combination of these characteristics (or none of them)?
4. PROBE for organizational ontology: How many levels of hierarchy w/in organization? Do subordinates receive and follow orders or are these just suggestions passed between friends/colleagues? Are orders generally disregarded or obeyed? Are roles w/in organization/entity fixed or fluid?
5. To what extent can we generalize about these enterprises? Is the organizational structure of the Cali enterprise generalizable to the Medellín and North Valley enterprises?

## POST CALI & MEDELLÍN ENTERPRISES

1. Did some of the individuals that are involved in drug trafficking today work for the Medellín, Cali or other organizations previously? Have the gaps in processing and distribution networks caused by dismantling of Cali and Medellín groups been filled by lower level employees?
2. What are these new enterprises like? Are they more or less sophisticated than their predecessors?
3. Has movement into heroin production and trafficking been done by some of the same organizations that were involved in cocaine/marijuana production, or are these new enterprises?

## INFORMATION GATHERING

1. How do these drug trafficking enterprises gather, record, and store information relating to their activities?
2. Do these enterprises use computers, written ledgers, or other formats for recording information?
3. W/in the enterprise, who has access to these records? Top-level bosses? Mid-level managers? Lower-level workers?
4. Do managers and bosses draw upon this information in conducting their activities?

## ADAPTABILITY/LEARNING

1. Do drug trafficking enterprises adjust their behavior in response to past experience or new information? Can you cite specific examples?
2. Do these enterprises learn from past mistakes? Can you cite specific examples?
3. Or, alternatively, do they just react to events in a random, haphazard fashion?
4. If these enterprises DO adjust their behavior in response to experience or information, do you think they store this information (i.e. 'lessons learned')? How so?
5. At what level does this behavioral adjustment come? Tactical? Strategic? Level of organizational goals? In other words, do these enterprises just learn to change tactics/strategies or do they also learn to change the goals that drive organizational action?
6. Are Colombian drug trafficking enterprises more efficient in producing and trafficking cocaine and heroin in 1998 than they were in 1981? Is the quality of their products higher today than it was seventeen years ago?

## CONCLUSION

1. Is there anything that we haven't talked about that you think is important that I take into consideration in this study?

## SNOWBALL RESPONDENT BASE

1. Can you suggest anyone else with whom you think it would be useful for me to talk to about this topic in Washington D.C.? Miami? Colombia?

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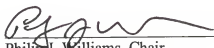
## BIOGRAPHICAL SKETCH

Michael Kenney received a Bachelor of Arts degree in political science from the University of Massachusetts at Boston in 1990. Upon graduation, he worked as a VISTA Volunteer-drug prevention specialist for the Center for Drug-Free Living in Orlando, Florida. In 1992, he joined the Peace Corps, working as an agricultural extension agent in Ecuador for two years.

After completing his Peace Corps service and traveling in Colombia, Mr. Kenney enrolled in the Center for Latin American Studies at the University of Florida. In May 1996 he graduated with a Master's degree in Latin American Studies. His thesis, titled "Inter-American Narcotics Control Cooperation: A Case Study of the U.S.-Colombian Anti-Drug Regime," focused on U.S.-Colombian counter-narcotics policies since the early 1980s.

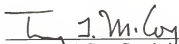
In the fall of 1996, Mr. Kenney enrolled as a Ph.D. student in the Department of Political Science at the University of Florida, where he continued his research on the Colombian drug trade and U.S.-Colombian relations. With support from the National Science Foundation and the Division of Sponsored Research, he conducted twelve months of dissertation research in Bogotá, Colombia, Washington, D.C., and Miami, Florida. Mr. Kenney spent the 2000-2001 academic year as a Hamburg pre-doctoral fellow at the Center for International Security and Cooperation at Stanford University. After he returned to the University of Florida, where he completed his dissertation in May 2002.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Philip J. Williams, Chair  
Professor of Political Science

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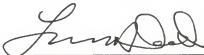
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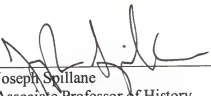
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Science

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This dissertation was submitted to the Graduate Faculty of the Department of Political Science in the College of Liberal Arts and Sciences and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

May 2002

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Dean, Graduate School